PBL Student-Centered Active-Learning Study Programmes

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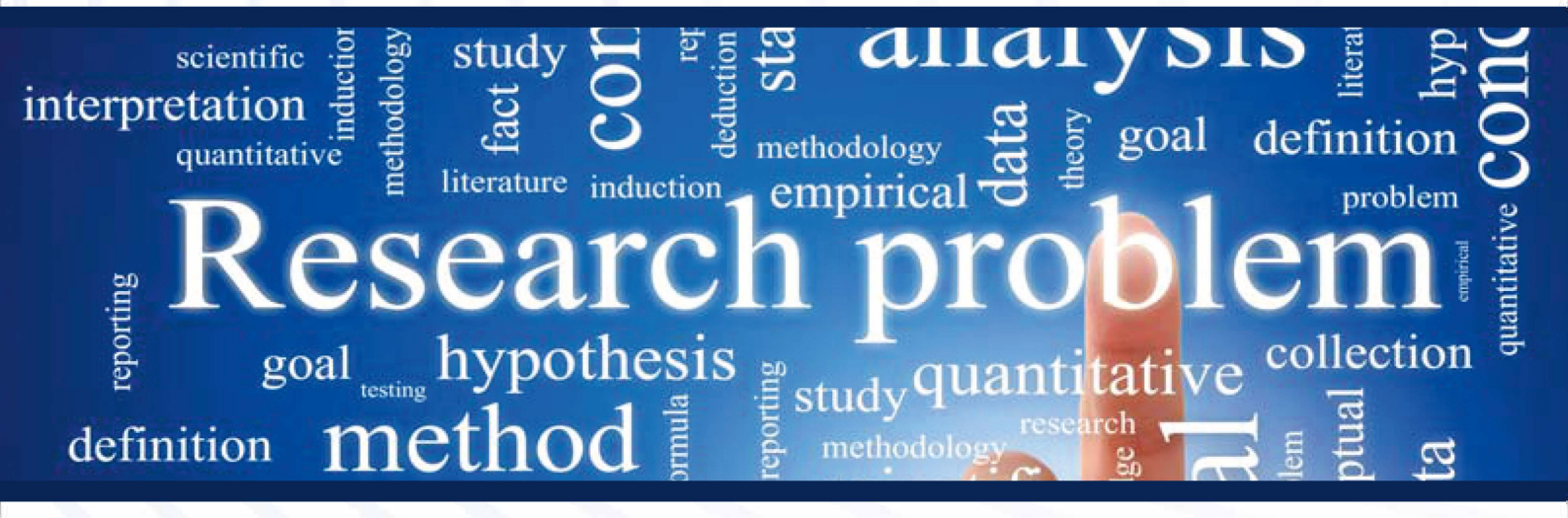

Erasmus+

Chisinau, 2020





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Introducing Problem Based Learning in Moldova: Toward Enhancing Students' Competitiveness and Employability

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Study programme

Consolidated Report

Work Package 3

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Chisinau, 2019

Executive Summary

This report consolidates the process and findings included in the reports of the universities of the Republic of Moldova, member of the project, and comprises: benchmarking methodology, analysis of the situation at the level of the higher education system, of the institution, and of the study programme, a comparative analysis of higher education systems in the Republic of Moldova, Great Britain and Denmark; conclusions from the analysis based on clear criteria for comparison, development and implementation of PBL-based Pilot study programmes.

The report shows the consolidation of the reports drawn up by each university in part on its characteristic bachelor's degree study programme. The purpose of the Work Package 3 consisted in conducting a study with reference to the implementation in the universities of problem-based learning (PBL). Special attention was given to studying the educational plan of the specialties included in the project from each university and comparing according to certain indicators of similar plans at the University of Aalborg and Gloucester.

As a result, based on the defined indicators, cross-analysis was generalised and systematized for all universities, common moments were highlighted, as well as the particularities that appear. It was found that the particularities, largely, are determined by the traditions in higher education, the degree of academic freedom available to universities, mind-set, but also certain legislative and normative acts regarding the university education in that country.

Following the analysis carried out, each university in the Republic of Moldova, a partner in the project, developed a pilot educational plan for the selected speciality, which has been implemented since 1 September 2017.

When drafting it, it was started from the experience of universities in the European Union, investigated in Work Package 2, from the educational plan of the aforementioned specialties at the time of the project launch, from the observance of certain regulatory provisions in force in the Republic of Moldova. The synthesis of the roadmap, which is an action plan, is also presented, with a view to implementing the educational plan, indicating both respective measures and the terms of achievement, the necessary resources and responsible persons.

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1 INTRODUCTION

The consolidated report reflects the outcome of the work carried out by the members of the working teams from the universities – member of the project consortium in the Work Package 3.

The objective of this Work Package is to carry out a thorough analysis of the needs identified for the study programme chosen by each partner in the Republic of Moldova.[1] To achieve this goal, the work teams analyse:

- The structure, how to approach the teaching-learning process in the partner universities in Moldova;
- Resources and links with the business environment / society of each study programme
- Content of those study programmes

Following the template methodology (Annex 7), each university in the Republic of Moldova has produced a report on bachelor's degree studies in a previously selected area - the student-centred active learning pilot programme. Thus, the Academy of Economic Studies of Moldova elaborated the report for the pilot programme "Business and Administration" (Annex 1), State University "Alecu Russo" of Balti – for the pilot programme "Public Administration" (Annex 2), State University of Cahul – for the pilot programme "Entrepreneurship and Business Administration" (Annex 3), State University of Moldova – for the pilot programme "Law" (Annex 4), State University of Medicine and Pharmacy „Nicolae Testemitanu" for the pilot programme "Public Health" (Annex 5), Technical University of Moldova – for the pilot programme "Software Engineering" (Annex 6).

An important element of the aforementioned reports, but also a major concern was the use and valorisation of a current bibliography, the research of internationally recognised specialists with reference to the use of student-centred learning methods, in general, and of problems-based learning, in particular. In this respect, team members have studied a set of books related to the use of problem-based learning (PBL). The analysis on their specific directions is presented in the individual university reports.

Also, based on the analysis of the legislation and the multiple normative acts regulating the didactic activity of universities, a great deal of attention has been paid to the practical aspects, which represent a consistent, appreciable part of the work.

[1] http://www.pblmd.aau.dk/pblmd-ro/pachete-de-lucru/pl3/

2 METHODOLOGY

2.1 BENCHMARKING METHODOLOGY

The purpose of this report is to conduct an analysis of the existing situation in the field of student-centred learning in universities in the Republic of Moldova, having the example of 6 universities, members of the PBLMD project: State University of Moldova (SUM), Technical University of Moldova (TUM), Academy of Economic Studies of Moldova (AESM), State University ”Alecu Russo” of Balti (SUARB); State University of Cahul (SUC), State University of Medicine and Pharmacy ”Nicolae Testemiţanu” (SUMPH). The type methodology developed within the project served both as a basis for the document and as a starting point for conducting comparative analysis of problem-based learning in the partner countries of the European Union: Denmark and the United Kingdom, presented in the report on Work Package 2.

For this purpose, there was identified the relation between the university's internal structures and study programmes, including how the elaboration and support of the study programme are integrated throughout the university. The cohesion of the elaboration of the study programme with its support was examined at different levels: level of education system, level of university, faculty, and study programme level.

The next step was to highlight common criteria for all study programmes, which, to a degree, eased work and allowed cross-analysis to be carried out with similar study programmes in the partner universities in the European Union.

The study of the experience of the partner universities in the field of the use of student-centred learning methods, in general, and of the one based on problems, in particular, but also of the entire education system, led to the elaboration of several variants of educational plans for the programmes analysed, which will eventually allow for the implementation of this method.

Also, the legislation of the Republic of Moldova, normative acts, regulating the work of universities in general and, of those, which lead to the initiation, conduct, monitoring and updating of the educational plans in particular was studied.

An important support, in order to accomplish these activities, had the study visits, the mobility of teaching staff from partner universities in the European Union, who participated with various trainings for teachers, as well as for students. Table 1 contains data on the number of study visits, the number of persons in mobility, the number of persons who participated in the trainings.

Table 1. Key methodological activities

Number of study visits of EU teachers in universities in RM	Number of mobilities of teachers from the EU in universities in RM	Number of trainings organised for teachers and students	Number of participants in the trainings
43	9	19	642

The number of participants in the trainings includes all persons registered in the trainings organized in the country, both teachers and students.

Teachers from the European Union during study visits or mobilities in universities in the Republic of Moldova attended different courses for teachers, that contributed to the training of their competences in the field of PBL use. They also had classes in front of the pilot group students. The courses referred to both the initiation into the PBL and some specialized lectures.

People in mobility in the universities of Moldova were from the University of Aalborg: Michael Fast, Marianne Stockholm, Romeo V. Turcan, Erling Jensen, Henrik Find Fladkjær; Alex Fomcenco, Andreea Ioana Bujac. From the University of Siegen: Steffen Jaschke, Tamara Riehle.

2.2 SITUATION ANALYSIS

To carry out the analysis of the situation in the field, following the methodology presented, legislative and normative acts, regulating the activity of the university in the Republic of Moldova, were analysed.

Thus, the analysis was carried out on the following levels:

- ✓ National level (higher education sector, system level)
- ✓ Institutional level (university management, faculty level, department level)

The analysis referred to the relations between different institutional levels concerning the elaboration, approval and implementation of the educational plans.

2.2.1 Level of the higher education sector / system level

Universities in the Republic of Moldova have university autonomy, which gives them a relatively wider freedom in various activities, including the elaboration of study programmes. At the same time, the role of national authorities in the field of higher education has been analysed in the elaboration, implementation, and evaluation of educational plans by elaborating the respective regulations, monitoring their compliance, but also by the external evaluation procedure of the study programmes by the national competent body – ANACEC.

2.2.2 Institutional level

The institutional level was analysed in the light of the tangents the internal structures have in the complex procedure of initiation, elaboration, implementation, evaluation and updating of study programmes, forming a certain hierarchy.

Administration (university management). It is described the role of the university management and its administrative structures, the approval procedure. It was necessary to analyse the role of the structures responsible for the quality management system of the university, the Senate, the Institutional Strategic Development Council.

Faculty. The analysis was based on the role of the faculty in the procedure outlined above.

The *Department* is the basic subdivision in the development of study programmes. The analysis in the report is carried out by demonstrating the importance of this subdivision and the

responsibility it carries, including through the involvement of teachers, students, graduates, employers.

2.2.3 The approval process of the study programme

The methodology presented allows for a meaningful analysis of the process of approval of the study programme at all levels provided for by the legislation in force.

2.3 COMPARATIVE ANALYSIS OF THE STUDY PROGRAMMES

Each University developed pilot educational plans at the speciality set out in the project. All universities based on legislative and normative acts in force, on institutional regulations. The development of the pilot plans was based on the experience of the partner universities in the European Union. Although they is based on problem-based learning, each programme has its peculiarities. The comparative analysis of study programmes is carried out according to certain criteria, each university-member of the project in the Republic of Moldova with the universities of Aalborg, Denmark and Gloucestershire in the UK.

2.4 DEVELOPMENT AND IMPLEMENTATION OF PILOT STUDY PROGRAMMES BASED ON PBL AND ROADMAPS

Each university has developed new educational plans, taking into account the experience of European universities in these specialties. Teachers were prepared to work with students in PBL-based courses through the visits and mobilities they had in the partner universities in the European Union, but also in the trainings that took place in the country. The courses were provided by teachers from universities in the European Union. Once again, it was found that more time is needed to implement this type of study. Each university provided for the programme developed a slower or faster transitional period, a more revolutionary or more evolutionary approach. The above-mentioned methodology allowed to mention the degree of implementation of problem-based learning in the developed programmes and to pursue their future.

3 SITUATION ANALYSIS

3.1 THE HIGHER EDUCATION SECTOR / SYSTEM LEVEL

In order to ensure minimum quality standards of the educational process, the accreditation of the study programme or/and the educational institution is a compulsory external evaluation procedure in the Republic of Moldova. Thus, the university gets the right to conduct the educational process, to organise admission to studies and exams to complete studies, as well as the right to issue diplomas, certificates and other study documents recognized by the Ministry of Education only if it has been accredited or has the authorisation for provisional operation.

The quality management in the higher education shall be ensured:

a) at the national level – by the Ministry of Education, Culture and Research (MECC), and the National Agency for Quality Assurance in Education and Research (ANACEC);
b) at the institutional level – by internal structures for quality assurance.

3.1.1 National accreditation body

According to Art. 115 of the Education Code of the Republic of Moldova, No. 152 of the 17.07.2014[2], the accreditation of the study programmes or/and educational institutions is carried out by the National Agency for Quality Assurance in Education and Research (ANACEC), which is an administrative authority of national interest, with legal personality, autonomous to the Government, independent in its decisions and organization, and funded from the state budget and own revenues.

The National Agency for Quality Assurance in Education and Research shall have the following duties and responsibilities:

a) to enforce the state policies in the quality area of vocational, higher and continuous education;
b) to develop in line with the European standards in the area and make public its own methodology of assessment and accreditation of the institutions providing professional training programmes and their programmes, and to propose them for Government's approval;
c) to formulate and revise periodically, based on the European and international best practices, the accreditation standards, the national standards of reference and performance indicators used in assessing and assuring quality in education;
d) to assess, on contractual basis, the institutions providing professional training programmes, as well as their programmes for the purpose of provisional authorization, accreditation, and reaccreditation in the vocational, higher and continuous education;
e) to carry out, on contractual basis, upon the request of the Ministry of Education the quality assessment of some programmes and institutions providing professional training programmes in the vocational, higher and continuous education;
f) to ensure the objectiveness and validation of the results obtained during the external assessment of the institutions providing training programmes and of their programmes;

[2] Codul Educației al Republicii Moldova, nr. 152 din 17.07.2014

g) to ensure transparency in the process of external assessment, including through publication of assessment results etc.

The National Agency for Quality Assurance in Education and Research shall be composed of:

a) Management Board,
b) Profile Commissions;
c) Administrative Apparatus.

The National Agency for Quality Assurance in Education and Research shall be composed of the subdivision for assessment of programmes and institutions providing professional training programmes in higher education, the subdivision for accreditation of programmes and institutions providing professional training programmes in higher education, and the subdivision for technical and vocational education and training, as well as other subdivisions necessary to achieve its tasks, established by the Governing Board.

Besides these subdivisions, according to the own regulation for organization and operation[3], the Agency shall have Specialty Commissions, which will develop registers of experts-evaluators based on open competition.

The executive management of the National Agency for Quality Assurance in Education and Research shall be exercised by the President of the Governing Board, assisted by Vice-president and Secretary General.

The Governing Board shall be composed of 15 members: teaching and scientific research staff, including one representative of students and business community. The members of the Governing Board cannot hold the position of public office, rector or director of the educational institution.

The members of the Governing Board shall be selected on open competition basis with international juries, for a mandate of 4 years, with the right to be re-elected only once. The competition shall be organized by the Governing Board. Every four years, eight new members of the Governing Board shall be elected. The President, Vice-president and Secretary General of the Governing Board shall be elected for a mandate of 4 years out of its members.

3.1.2 Relationship of the accreditation body with the Ministry of Education, Culture and Research

The National Agency for Quality Assurance in Education and Research at the request of the Ministry of Education, Culture and Research, on a contractual basis, performs the assessment of the quality of programmes and institutions providing professional training programmes in VET, higher education, and continuous training.

In exercising its duties, ANACEC has the right to inform the evaluated institution and the Ministry of Education, Culture and Research about the results of the external evaluation.

[3] Regulamentul cu privire la organizarea şi funcţionarea Agenţiei Naţionale de Asigurare a Calităţii în Învăţământul Profesional, aprobat prin Hotărârea Guvernului nr. 191 din 22 aprilie 2015.

The Agency shall transmit to the Ministry of Education, Culture and Research and to the educational institution/institutions the decision on the external assessment, as well as placing the decision on the Agency's webpage after the completion of the appeals procedures.

Decision on the authorisation or non-authorisation for provisional operation, accreditation or non-accreditation of the study programme or an educational institution, as well as the withdrawal of the right of activity of an educational institution or of the right to provide a study programme shall be adopted by decision of the Ministry of Education, Culture and Research, based on the decision of the Governing Board of the Agency or the decision of another quality assessment agency, entered in the European Quality Assurance Register in Higher Education.

3.1.3 Relationship of the accreditation body with universities

Accreditation is required and is granted, for each educational institution and for each study programme of cycle I, cycle II and cycle III. The initiation of a master's degree programme is possible when the bachelor's degree programmes in the same professional training field are accredited, the programme has obtained the authorisation for provisional operation or another master's degree programme in the same general field of study is accredited.

The accreditation of a study programme and an educational institution is awarded by Government decision, on the proposal of the Ministry of Education, Culture and Research and on the decision of the Governing Board of ANACEC. After obtaining accreditation, study programmes and educational institutions shall be subjected, at least every 5 years, to the external assessment of quality for re-accreditation.

According to the Education Code of the Republic of Moldova, the following will depend on the results of the external evaluation of the higher education institutions:

- the ranking of universities by category within the accreditation procedure;
- provisional authorization, regular accreditation and re-accreditation of higher education institutions, as well as ranking of study programmes;
- the ranking of higher education institutions shall be based on the methodology approved by ANACEC;
- depending on the category of the higher education institution and the ranking of the study programmes, the number of places financed by the state budget awarded to the higher education institution shall be determined; budgetary funds allocated to the higher education institution for research, development, innovation and artistic creation activities;
- other norms under the law.

3.2 INSTITUTIONAL LEVEL: MANAGEMENT

3.2.1. Structure and tasks of the university governing and management bodies

The Education Code of the Republic of Moldova determines the governing bodies of the universities, their structure and number. The law provides that the system of management bodies in the higher education institutions shall encompass *the Senate, the Strategic and Institutional*

Development Council, Scientific Council, Faculty Council, Administration Council and Rector of the institution[4].

The Senate of the higher education institution represents the supreme management body composed of scientific-teaching and non-teaching staff, elected via secret vote of the teaching staff of the faculties, departments, and scientific centres, of students elected by the academic units and students' associations, and of representatives of the trade-unions, in line with the institutional regulation, developed according to a framework-regulation approved by the Ministry of Education, Culture and Research[5]. The members of the Senate shall be: rector, vice-rectors and deans. The Senate mandate shall last for 5 years, synchronized with the mandate of the rector. The mandate of the Senate members among students shall last for 1 year that may be renewed. The Senate is headed by the rector of the institution.

The Senate shall have the following competences and duties:

a) to ensure the observance of the principle of academic freedom and university autonomy;
b) to develop and approve the University Charter;
c) to approve the Institutional Development Strategic Plan;
d) to approve the institution's budget;
e) to develop and approve the methodologies and regulations for organization of the academic, research and artistic creation activities and programmes within the institution, as well as the methodologies and regulations for recruitment, employment and assessment of the teaching staff;
f) to approve the organizational chart and the functional structure of the educational institution. In case of the educational institutions in the area of military, security and public order, the organizational chart and the functional structure shall be proposed by the Senate, and shall be approved by the heads of the relevant authorities in the area of defence, security and public order, in which subordination the respective institutions are;
g) to develop and approve the regulation on the modality of electing the rector, according to a framework regulation approved by the Ministry of Education, Culture and Research;
h) to confirm, without the right to amend, the list of the Institutional Strategic Development Council members.

Another governing university body is the **Institutional Strategic Development Council (CDSI)** consisting of 9 members: 4 internal (rector, vice-rector and two elected members from the higher education institution's teaching staff, who do not hold managerial positions), and 5 external members nominated by the University, Ministry of Education and Ministry of Finance. CDSI members are appointed for a term of 5 years.

The duties of the CDSI are determined by the Education Code and consist of the following:

[4] Codul educației al Republicii Moldova, nr.152 din 17.07.2014, art. 102

[5] Regulamentul-cadru privind organizarea și funcționarea organelor de conducere ale instituțiilor de învățământ superior din Republica Moldova

a) to coordinate the development of the Strategic and Institutional Development Plan encompassing the vision, mission, institution's development strategy and the main actions for a period of at least 5 years and to submit it to the Senate for approval;

b) to monitor and evaluate the efficiency of using the financial resources and to submit the educational institution's draft budget to the Senate for approval;

c) to approve the model-study contract and the amount of tuition fees;

d) to ensure the institutional management related to the intellectual property rights and technological transfer;

e) to take decisions, with the approval of the Senate, regarding:

- development and consolidation of the institution's patrimony – decision to be approved with at least 2/3 votes of the Council members;
- launch and closure of the study programmes – decision to be approved with at least 2/3 votes of the Council members;
- methodology for remuneration and motivation of personnel;
- entrepreneurship activities, public-private partnerships and cooperation with the businesses;
- involvement in consortiums and mergence with other higher education institutions;

f) to organize and carry out the election for rector's vacancy, in line with the Institutional Regulation for organization and carrying out the elections[6].

The Institutional Strategic Development Council is an elective body, members of whom, with the exception of the Rector and the Vice-rector, are elected in compliance with the framework regulation drawn up by the Ministry of Education, Culture and Research.

The Scientific Council is the collective body consisting of 7-15 persons, who operate in accordance with the Regulation on the organisation of doctoral degree studies, Cycle III[7].

May be a member of the Scientific Council persons within or outside the institution, in the country or abroad, scientific personalities or the relevant industrial and socio-economic sectors, as well as representatives of Doctoral students in the institution's doctoral schools.

The members of the Scientific Council, who are academics or researchers, must have the right to supervise the doctorates, in the country or abroad, and to meet the minimum and mandatory standards for granting the right to supervise the PhD, proposed by the national authority empowered to confirm the scientific titles and approved by order of the Minister of Education.

The Scientific Council is chaired by a president, assimilated/associated with the function of vice-rector.

The main duties of the Scientific Council are:

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[6] Regulamentul-cadru privind modul de alegere a rectorului instituţiei de învăţământ superior din Republica Moldova

[7] Regulamentului privind organizarea studiilor superioare de doctorat, ciclul III, aprobat prin Hotărârea Guvernului nr. 1007 din 10 decembrie 2014.

a) Elaboration of the research strategy of the higher education institution, or of the consortium or partnership;
b) Elaboration of the institutional regulation for the organisation and conduct of doctoral degree study programmes which they submit for approval by the Senate of the higher education institution or to the equivalent body of consortiums or partnerships;
c) Approving decisions on the establishment and abolition of doctoral schools within the institution or partnership;
d) Selection of doctoral supervisors for activity in a new doctoral school;
e) Coordinating the partnership according to the partnership agreement, where applicable;
f) Other specific tasks established by the institutional regulation for the organisation and conduct of doctoral degree study programmes.

The Rector, assisted by the pro-rectors, with the support of the Administration Board ensures the operative management of the university and is the executor of the institution's budget.

The **Administration Board** consists of the rector, the pro-rectors, the deans, the heads of departments, the heads of chairs, the heads of services and other university subdivisions.

In order to ensure the quality of the study programmes and the teaching and learning process in higher education institutions, the **quality management** system is set up.

The Rector of the University is responsible for the elaboration of policy and objectives in the field of quality. Based on the Rector's decisions, the leadership skills can be delegated to a pro-rector, usually the pro-rector for didactic activity, who becomes responsible for quality assurance.

For the coordination of quality assurance at the level of the Senate the Quality Council is established, which has an advisory role in substantiating decisions on the policy and objectives of the institution relating to quality. This Council has the mission to establish, document, implement, maintain and improve the quality management system of the institution. The composition of the Council shall be determined by each institution on the basis of its own criteria.

The implementation of the quality policy and objectives is carried out at institutional level by the Department/Section responsible for quality management, at the faculty level by the quality councils/commissions/committees, and at the level of Departments/Chairs – the person responsible for quality assurance.

The main objectives of the Department/Section responsible for quality management at institutional level are:

- Monitors quality assurance structures at institutional level;
- Coordinates the process of elaboration and implementation of study programmes and curricular support;
- Carries out quality management, plans actions, develops self-assessment reports and quality assurance documents, trains staff regarding quality assurance, monitors internal assessments and coordinates external evaluations;
- Assesses the quality of the conditions/resources, process and results of the initial professional training;

- Provides the curricular conditions for integrating the SUM into the common European Higher Education Area.

3.3 INSTITUTIONAL LEVEL: FACULTY

The Faculty Council is the decision-making and deliberative body that assures the management, guidance and control of the educational and scientific research activity of the faculty and is elected for a term of 5 years. The operative management of the faculty is carried out by the Dean with the support of the Faculty Council.

Students are represented in the Faculty Council in proportion of 1/4 of the total number of members. The term of office of the Council members among the students is one year, with the possibility of renewal of the mandate. The ex-officio members of the Faculty Council are the dean, the deputy-dean and the heads of the faculty's departments / chairs.

The quality assurance committees are consultative structures of the Faculty Councils, formed in order to promote the policy of quality assurance of the professional training process at faculties. In the composition of the committees, representatives of the faculty, Quality Council, academic staff and faculty students are included. These committees operate permanently, in collaboration with the university Quality Council, and are designed to coordinate and monitor the elaboration of educational plans for study programmes (cycle I and cycle II) and ensure the proper conduct of activities and quality assurance evaluation in the faculty.

3.4 INSTITUTIONAL LEVEL: DEPARTMENT

The executive management of the department is carried out by the head of the department, who is chosen for a period of five years, in accordance with the regulations in force.

The Head of the Department mainly participates in the elaboration of educational plans, approves the analytical programmes of the disciplines provided by the chair and presents them for examination to the Faculty Council, organizes, coordinates and monitors the deployment of the process of studies and scientific research and is responsible for ensuring the quality of the teaching-learning process performed by the members of the department.

3.5 THE PROCESS OF APPROVING THE STUDY PROGRAMME

Bachelor's degree studies are organized by professional training areas (specialties/study programmes) in accordance with the Nomenclature of professional training areas and specialties on the training of specialists[8], except areas governed by special rules in the European Union.

The initiation of new study programmes, for the cycle I, is carried out at the level of the chair/department and is based on complex analyses of the internal resources of the university and the context of their functioning.

[8] http://lex.justice.md/index.php?action=view&view=doc&lang=1&id=312972

The members of the team appointed by the management of the chair / department shall establish the disciplines in the educational plan and the list of scientific-didactic staff with competences in the field, to be discussed in the Faculty Council. Following the Council's approval of the programme, in accordance with the framework plan developed by the MECC[9], the educational plan and the state of functions for the new study programme shall be drawn up.

After approval in the Faculty Council, the documents of the study programme shall be submitted for approval to the University Senate. The final decision on the initiation of study programmes is approved by the Council for Institutional Strategic Development, as required by the legal provisions.

Following the final approval, the faculty management designates the team to develop the *self-assessment report* of the new study programme for provisional authorisation. The self-assessment report shall be drawn up in accordance with the requirements laid down in the Guidelines for external evaluation of bachelor's degree programmes, higher education[10] developed by the National Agency for Quality Assurance in Education and Research (ANACEC).

On the basis of these documents and correlated to the material basis provided for this programme, the final version of the self-assessment report shall be drawn up. The self-assessment report shall be submitted to the pro-rector for the didactic activity, to be checked by a Commission designated by the University subdivision responsible for quality management. After remediation of any deficiencies, the self-assessment report, implicitly the educational plan, shall be submitted, at least 6 months before the commencement of the study programme, to the Ministry of Education, which, after coordinating the educational plan, forwards it to ANACEC for conducting the external evaluation with a view to provisional authorisation.

Within up to 45 working days from the date of registration of the application, the Governing Board of the Agency (ANACEC) shall announce the decision on the approval or rejection of the initiation of the external evaluation procedure of the study programme. After approving the decision on initiating the external evaluation procedure, the Governing Board of the Agency shall designate the external evaluation commission, consisting of selected expert evaluators from its own register of evaluators, and appoint the evaluation coordinator.

The external evaluation commission verifies the achievement of accreditation standards by examining the self-assessment dossier submitted and by visiting the institution (1-3 days), based on the provisions of the Methodology of external quality assessment for authorisation for provisional operation and accreditation of study programmes and vocational education and training, higher education and continuous training institutions[11], as well as the assessment standards and minimum standards of assessment set out in the Guidelines for external quality assessment.

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[9] https://mecc.gov.md/sites/default/files/traducere-plan-cadru_revised.pdf

[10] http://www.anacip.md/index.php/ro/legislatie/anacip/ghiduri/send/22-ghiduri/412-ghid-de-evaluare-externa-a-programelor-de-studii-de-licenta-invatamantul-superior

[11] http://anacip.md/index.php/ro/legislatie/anacip/metodologii/send/19-metodologii/377-metodologia-de-evaluare-externa-a-calitatii-in-vederea-autorizarii-de-functionare-provizorie-si-acreditarii-programelor-de-studii-si-a-institutiilor-de-invatamint-profesional-tehnic-superior-si-de-formare-continua

Within 30 working days from the date of approval of its composition the external evaluation commission shall draw up the *External evaluation report* containing the recommendation on the external evaluation of the study programme: provisional authorisation or non-authorisation.

The External evaluation report shall be submitted for examination to the Governing Board of the Agency, which shall, within 10 working days, adopt the decision on provisional authorisation or non-authorisation. ANACEC transmits the decision on the external assessment to the Ministry of Education, Culture and Research and the educational institution, as well as placing the decision on the Agency's webpage.

The authorisation for the provisional operation of a study programme in higher education shall expire after the first promotion of students and the institution must request the accreditation of that study programme.

Where the provisionally authorised educational institution does not require accreditation within 5 years, it shall not have the right to organise the admission to the studies, nor shall it be possible to issue study documents for the promotion of graduates.

4 COMPARATIVE ANALYSIS OF THE STUDY PROGRAMMES

The comparative analysis of the study programmes was carried out on the basis of the comparison of relevant criteria related to the respective study programmes in the universities of the Republic of Moldova, University of Aalborg, University of Gloucestershire. The analysis of the pilot study programmes in the project is presented in the university reports of the Work Package 3, the analysis of the study programmes in the partner universities in the European Union was carried out in the Work Package 2.

The comparative analysis, according to the criteria selected, is summarized in Table 2.

The analysis of the information in the table allows us to find, that between the pilot study programmes from the universities of the Republic of Moldova and those from the partner universities in the EU -University of Aalborg, Denmark and the University of Gloucestershire, the United Kingdom – there are some similarities, but also certain differences. To see this, we highlighted the basic criteria that characterize the study programmes and overlapped them.

We mention certain peculiarities presented by the study programme at the State University of Medicine and Pharmacy ”Nicolae Testemitanu” (SUMPH): firstly, the comparative analysis of the SUMPH’s pilot programme was carried out in relation to the study programmes of the Faculties of Medicine of the University of Aalborg and the University of Plymouth, United Kingdom (and not with the one in Gloucestershire). This was due to the fact that the University of Gloucestershire does not provide training for students in the field of medicine. Secondly, we refer more often not to the programme in general, but to a complex course - the course of Neuroscience.

The study programme „Software Engineering” at TUM is developed from the scratch, taking into account the PBL teaching methods. Prior to the project, this specialty did not exist in the Nomenclature of professional training areas and specialties in higher education[12]. It appeared in the new version of the nomenclature [13], in the year of 2017.

[12] Nomenclatorul domeniilor de formare profesională și al specialităților pentru pregătirea cadrelor în instituțiile de învățământ superior, ciclul I, din 07.07.2005, disponibil la http://lex.justice.md/index.php?action=view&view=doc&id=312972

[13] http://lex.justice.md/index.php?action=view&view=doc&lang=1&id=370821

Table 2. Comparative analysis of the study programmes

Study programme / University	Criteria	University from the Republic of Moldova	AAU	UOG
Business and Administration (AESM)	Duration of studies	3 years, 6 semesters	3 years, 6 semesters	3 years, 6 semesters
	Workload per semester/year	30/60 ECTS; 1 ECTS = 30 hours	30/60 ECTS; 1 ECTS = 27 hours	60/120 CAT; 1CAT = 1/2ECTS; 1 CAT = 10 hours
	Assessment of students	Individually, less frequently in the group; in writing, orally and assisted by the computer. Knowledge and competences are assessed; 1-2 current evaluation sessions are organized; there are detailed descriptions in the institutional Regulation.	Individually and in the group; in writing with the compulsory participation of the external evaluator; the competences are assessed. There is an institutional regulation with a detailed description of the assessment process.	Individually and in the group; orally and in writing. Competences are assessed. There is an institutional regulation with a detailed description of the assessment process.
	Involvement in the elaboration of the study programmes	Only teachers are involved directly. Students, graduates, employers are consulted	Teachers, students, employers, graduates.	Teachers, students, employers, graduates
	Monitoring and periodic analysis of the programmes	In a regular manner, the review is carried out once every 5 years. Every year, feedback is obtained from students, graduates, employers, which allows an analysis to be carried out and, if necessary, initiation of the updating procedure.	Every semester	Every year
	The level of application of the PBL model	In the variant I of the educational plan, applicable since 1 September 2017, the courses and module formation shall be grouped. Each year it is foreseen to develop a project based on problems identified by students.	The PBL method is perceived as a philosophy of the university, is fully applied to all years of study, projects are a component part of the study process.	The PBL method is used in line with other student-centered learning methods.
Public administration (SUARB)	Duration of studies	3 years, 6 semesters	Integrated studies, 5 years (4 + 1), 10 semesters	3 years, 6 semesters

	Workload per semester/year	30/60 ECTS; 1 ECTS – 30 hours	30/60 ECTS; 1 ECTS – 27 hours	60/120 CAT; 1CAT = 1/2ECTS; 1 CAT = 10 hours
	Assessment of students	- Current assessment (test, essay, case study, project, report, presentations, etc.) In the current assessment, information technologies (MOODLE learning platforms, etc.) are used. - Final assessment of the course units/module (oral/written exam, combined exam, computer assisted assessment (online on learning platforms) etc.	Assessment of students knowledge is carried out in the form of written and oral examinations, projects or other appropriate forms of assessment. Compulsory modules are partially assessed by written examination (50%). Students are given the opportunity to promote current examinations with a view to preparing for summative assessments.	Students' knowledge is assessed through written exams or course papers and other appropriate forms of assessment. Compulsory modules are partially assessed by written examination (50%). Students are given the opportunity to promote current examinations in order to prepare for summative evaluations.
	Involvement in the elaboration of the study programmes Teaching	Teachers are involved, in particular, the head of department – at the drafting stage. Students, employers, graduates are involved in the discussion stages.	The initiative to create new study programmes usually comes from a teacher or a group of teachers. At the faculty there are people who have the necessary knowledge on the rigors and the set of documents to be drawn up for the opening of new programmes. The Dean signs the package of documents after this thorough research. After approval of the programme by the dean, it is evaluated by the Board of Studies.	The initial approval of new courses is made by the Academic Development Committee. Faculties usually generate new courses according to the University and Faculty Plan, which is presented by the Dean. The validation of the courses is made by the validation Panel which is approved by the Committee on Academic and Quality Standards.
	Monitoring and periodic analysis of the programmes	The modification of the educational plan is carried out by the responsible chair and approved by the Faculty Council. The Review/updating of the educational plans is validated by the SUARB Senate and presented every 5 years for coordination, to the	Monitoring is carried out on a permanent basis, at semester level.	Monitoring is carried out continuously, updating - annually, as necessary.

		Ministry of Education, Culture and Research.		
	The level of application of the PBL model		The curriculum includes PBL based on project activity as a central and binding element and contains an exhaustive description of the educational objectives including the competences and skills achieved	The programme uses a variety of approaches, such as: lectures, debates, seminars, role-playing, simulated processes, case studies and presentations, to ensure that the learning outcomes of the programme can be achieved and demonstrated.
Entrepreneurship and Business Administration (SUC)	Duration of studies	3 years, 6 semesters	3 years, 6 semesters	3 years, 6 semesters
	Workload per semester/year	30/60 ECTS; 1 ECTS = 30 hours	30/60 ECTS; 1 ECTS = 27 hours	60/120 CAT; 1CAT = 1/2ECTS; 1 CAT = 10 hours
	Assessment of students	Individually, knowledge and competences are assessed; there are detailed descriptions in the institutional Regulation. There are 1-2 current evaluation sessions. The share of the exam grade constitutes 40%, current evaluations – 60%.	Individually and in group; the competences are evaluated. There are institutional Regulations with detailed description of the evaluation process.	Individually and in group; the competences are evaluated. There are institutional Regulations with detailed description of the evaluation process.
	Involvement in the elaboration of the study programmes	Usually, only teachers are directly involved in the elaboration of a study programme. However, students, employers, and graduates are consulted either through different questionnaires, or by organizing different roundtables, etc. So, several parties participate indirectly in the elaboration and improvement of the programme.	Teachers, students, employers, graduates are involved both directly (through participation in different Committees) and indirectly (through answers to questions, other feedback).	Several actors are involved in elaborating, developing and improving a study programme: teachers, students, employers, graduates
	Periodic monitoring and analysis of study programmes	In a regulatory manner, the review is carried out once every 5 years. Every year, feedback is collected from students, graduates, employers, which allows an analysis	The review of the programmes is made every semester, for this purpose 8 annual assemblies are organized.	It is analysed annually, including through feedback from students, employers

		to be carried out and, if necessary, initiation of the updating procedure.		
	Level of application of the PBL model		The PBL method is perceived as a philosophy of the university, is fully applied to all years of study, projects are a component part of the study process.	The PBL method is used together with other student-centred study methods.
Law (SUM)	-Duration of studies	8 semesters, 4 years	Integrated studies – 10 semesters, 5 years	6 semesters, 3 years
	-Workload per semester/year	30/60 ECTS; 1 ECTS – 30 hours	30/60 ECTS; 1 ECTS – 27 hours	60/120 CAT; 1CAT = 1/2ECTS; 1 CAT = 10 hours
	- Assessment of the students	Current assessments; Final assessment Written and oral combined assessment	There are several ways of assessing students. Thus, some teachers use the 2 hour exam (2 hours written exam). The Test includes 5 more theoretical, but analysis or comparison questions. There is also the 24-hour exam (24-hour written project), which involves solving a practical problem and requires a knowledge of national and international legislation.	Written examinations and writing of course theses or other forms of assessment, as appropriate, in writing. Compulsory modules (excluding LW4004 (legal skills) are partially evaluated by written examination (50%). Students are given the opportunity to pass preliminary examinations in preparation for summative evaluations. Some modules use different methods of examination (written or oral evaluation) as specified in the module descriptor.
	Involvement in the elaboration of the study programmes	The study programme is elaborated by academic staff, including with didactic and administrative functions. The faculty office, the faculty council, as well as the SUM Senate consist predominantly of didactic staff. The implementation shortcomings, and proposals to improve the study programme, are reported by the academic staff following the continuous application process. Consequently, the	Study programmes in higher education institutions in Denmark are usually designed on the initiative of research groups with performance results, based on human potential and material obtained from research. Each programme is in the responsibility of a programme team (in the AAU - the study board), subordinated to a department (school), in a faculty.	The initial approval of new courses is made by the Academic Development Committee. Faculties usually generate new courses according to the University and Faculty Plan, which is presented by the Dean. The validation of the courses is made by the validation Panel which is approved by the Committee on Academic and Quality Standards.

		organisation and coordination of the study programme is the result of its effective application by the didactic and academic staff.		
	Periodic monitoring and analysis of study programmes	Monitored annually, if necessary the programmes shall be updated after each promotion	Each study programme is continuously monitored primarily by the Board of Studies in charge of this programme. This is achieved by (a) the evaluation of each semester and of the teaching process carried out within the semester, (b) full evaluation of the study programme.	
	Level of application of the PBL model	Mostly traditional teaching-learning methods, which assumed a more passive involvement of students and, as a rule, referred to the transfer of knowledge from the teacher to the student.	Problem-based learning (PBL) is implemented at all faculties within the AAU. All study programmes offered at the University are developed on the basis of this methodology. The inter-university structure responsible for the implementation, promotion and development of the PBL within the AAU is the PBL Academy.	Active learning is ensured through the following tools: simulation, problem-based Learning (PBL), case studies, research/investigation projects. Working in the group is one of the most common methods used to achieve individual student work.
”Neuroscience” course at the specialty ”Public Health” (SUMPH)*	-Duration of studies	Integrated studies, 12 semesters/6 years		10 Semesters/5 years
	-Workload per semester/year	30/60 ECTS; 1 ECTS – 30 hours	30/60; 1 ECTS – 27 hours	ECTS60/120 CAT; 1CAT = 1/2ECTS; 1 CAT = 10 hours
	Assessment of students	Individual, oral, computer-assisted examination, analysis of clinical cases	Individual and group examination, analysis of problems, clinical situations, etc.	Individual or group examination, as appropriate; orally and in writing, analysis of case studies, etc.
	Involvement in the elaboration of	They are developed by teachers with the direct involvement of employers and graduates	Teachers, students, graduates, employers are participating	All stakeholders are involved: teachers, students, employers, graduates

	study programmes			
	Periodic monitoring and analysis of study programmes	The curricular content is periodically reviewed, with an emphasis on the pragmatic nature of medical education in line with market needs. In reviewing and adapting the curriculum of the Faculty of Medicine, for all study programmes, several decision makers are involved: the dean and the deputy deans, the faculty council, the curriculum commission, the student representatives (also part of the faculty council of the curriculum Commission), representatives of the Association of Students and Residents, representatives of the Employees Union "Nicolae Testemiţanu"	Permanent monitoring, annual update, as needed	Permanent monitoring and analysis, yearly update, as needed
	Level of application of the PBL model	Various student-centred methods are used, including PBL	The study system is based on PBL predominantly	The study system is based on various teaching methods centred on the student, including PBL
Software Engineering (TUM)	-Duration of studies	8 Semesters, 4 years 60 ECTS; 1 ECTS = 60 hours	6 semesters, 3 years	6 semesters, 3 years, with the four-year study option. This means that students can do an internship in the industry after the second year of study. After this, they return to the university to complete the last year of study.
	-Workload per year	30/60 ECTS; 1 ECTS – 30 hours	30/60 ECTS; 1 ECTS – 27 hours	60/120 CAT; 1CAT = 1/2ECTS; 1 CAT = 10 hours
	- Assessment of students	Individually, orally, in writing, computer-assisted. Current assessment, final assessment	Individually, in group, orally, in writing, combined. Basic – project assessment	Individually, in group, orally, in writing, combined.
	-Involvement in the elaboration of	The teachers are directly involved. Indirectly – students, employers, graduates, being	A working group is formed involving teachers, students, employers, graduates.	All categories of stakeholders are involved: teachers, students, graduates, employers.

	study programmes	consulted through various questionnaires	All directly participate in the elaboration of the study programme.	
	Periodic monitoring and analysis of study programmes	Monitored periodically, every 5 years modified, updated annually if necessary.	Monitored permanently, once in the semester, updated plans shall be drawn up	Reviewed and updated annually
	Level of application of the PBL model	Different student-centred methods are used, the Programme is based on the model of studies in the University of Aalborg, has 4 courses each semester of 5 credits each and a project taken out of the courses of 10 credits.	The entire study process is based on the use of PBL learning	In line with PBL learning, other student-centred methods are used.

* For SUMPh, a comparison is made with the University of Medicine and Dentistry in Plymouth, UK. The University of Gloucestershire does not have the faculty of medicine

5 DEVELOPMENT AND IMPLEMENTATION OF PILOT STUDY PROGRAMMES BASED ON PBL

5.1 PILOT STUDY PROGRAMMES BASED ON PBL

As a result of the project, every University in Moldova, a member of the project, developed study plans for the particular specialty, taking into account the normative acts of the Republic of Moldova, regulating the Higher education sector, but also based on the experience of the partner universities in the European Union. Each University presented its pilot programmes and started implementation, forming experimental groups, starting with 1 September 2017.

The level of PBL use is different in different universities. This depends on the specifics of the study programme and the degree of teacher training. Even though at the beginning of the implementation of the pilot plans not all courses were foreseen to be kept using the problem-based method, with the experience of the years, they will be expanded.

In Table 3 we present, in a systematized way, the pilot study programmes from each university with the degree of implementation of the PBL method. The existing situation is presented at the time before the implementation of the PBL and the change of situation, starting with 1 September 2017, when the pilot groups were formed. The educational plans were changed, modules were formed from several disciplines, the project was introduced as a method of studying and evaluating knowledge. The Regulation on the Organisation of Higher Education Studies under the National System of Study Credits[14], article 82, provides for the elaboration of a project (annual thesis) during the entire 3-year study period (study programmes with 180 ECTS), in year II, and 2 projects (year II and year III) in the 4-year study programmes (with 240 ECTS). In the pilot programmes, projects were introduced as a method of study and are foreseen every semester in several disciplines.

A more special situation is with the Software Engineering programme within the TUM. Unlike others, this specialty did not exist in the Nomenclature of professional training areas and specialties in higher education, being included in the new Nomenclature approved on 28 June 2017. If this programme had previously existed, it certainly did not differ in comparison with other educational plans analysed from other universities, given that the basic normative framework is the same.

Another peculiarity presents the University of Medicine and Pharmacy „Nicolae Testemitanu”. Within this university, the studies are integrated, having 300 ECTS.

[14]https://mecc.gov.md/sites/default/files/ordinul_nr._1046_din_29.10.2015_regulamentul_de_organizare_a_studiilor_in_invatamintul_superior_in_baza_sistemului_national_de_credite_de_studiu_0.pdf

Table 3. Pilot study programmes based on PBL

Study programmes, Cycle I, bachelor's degree	Level of development	Level of implementation	ECTS	% of total ECTS (PBL coverage level)
Business and Administration (AESM)	In the existing study programme, both traditional and student-centered teaching methods are used. In the course of 6 semesters, a year project shall be drawn up in semester IV, equivalent to 3 ECTS.	1. The art of communication and professional ethics, sem I., including project	5	
		2. The organization's economy and management, including the project, sem.II	10	
		3. Initiation and development of the business, sem. III, including the project	8	
		4. Operations management, sem. IV / semestrial project	16	
		5. Company management, sem.V, including project	14	
		6. Bachelor's degree internship and development of the bachelor's degree thesis	22	
Total ECTS disciplines based on PBL			75	41,7
Entrepreneurship and Business Administration (SUC)	Teaching is based on both traditional and student-centered methods. The economic project is developed in semester V and is quantified by 3 ECTS	*1. Principles of study by „PBL – Problem Based Learning" method, sem. I* 2. Economic theory I (microeconomics), sem. I 3. Bazele managementului, sem. I (Project) 4. Economic theory II (macroeconomics), sem. II 5. The Basics of Entrepreneurship, sem. II (Project) 6. Economic statistics, sem.II 7. Basics of accounting, sem.II (Project)	2 6 6 6 6 6 6	

		8. Producttion management,sem.III 9. Management methods and techniques, sem.III 10. Company finances,sem.III *11. Business law,sem.III* 12. Managementul of antrepreneurial projects, sem.IV 13. Marketing, sem IV 14. Human resources management,sem.IV 15. Internship , sem IV 16. Economic-financial analysis,sem.V 17. Risk management, sem.V 18. supply managementul,sem.V 19. Quality managementul,sem.V *20. Development antrepreneurial project,sem.V , Project* 21. Innovational management, sem.VI 22. Comparative management, sem.VI 23. Production internship, sem.VI	6 6 6 6 6 6 6 3 6 6 3 3 3 3 6	
Total ECTS disciplines based on PBL			113	62,8
Public Administration (SUARB)	The year thesis is part of a fundamental or specialty unit of the semester III-IV and is quantified separately with ECTS.	1. Constitutional law and political institutions, sem. I 2. Public administration theory, sem. I 3. The History of public administration, sem. I 4. Politology, sem. I 5. Interdisciplinary Project, sem. I	6 6 4 4 10	

		6. Administrative Law I, including project, sem. II 7. Administrative Law II, sem. III 8. Financial and fiscal Law, sem. III 9. Contravention law, sem. III 10. intedisciplinary Project, sem. III 11. Specialty internship I + Project 12. Specialty internship II + Project 13. Research internship + Bachelor's degree thesis	6 4 4 4 8 14 14	
Total ECTS disciplines based on PBL			84	35,0
Law (SUM)	Teaching is based on traditional methods and on student-centered methods. A year project shall ve drawn up in semester VI, which is part of a discipline, and shall be evaluated within the respective course.	1. Constitutional law, sem. I + Project 2. Administrative law, sem. II + Project 3. Diplomatic uses and techniques/Juvenile delinquency/Medical law/Comparative legal systems, sem. III + Project 4. Criminal law. Special part (I), sem. IV + Project 5. EU institutional law, sem. IV + Project 6. Criminal law. Special part (II), sem. V + Project 7. Civil procedural law. General part, sem. V + Project 8. Elaboration of civil procedure documents, sem.VI + project 9. Legal protection of human rights, sem. VI + Project 10. Comparative constitutional law, sem. VII + Project 11. The law of the European Convention on Human Rights, sem. VII + Project 12. Research internship + Bachelor's degree thesis	6 6 5 4 5 5 6 4 4 4 4 9	
Total ECTS disciplines based on PBL			62	25,8
		1. Conceptual design of an IT application, sem.I + project	10	

Software Engineering (TUM)	It is a new specialty, appearing in the NOMENCLATURE of professional training areas and specialties in higher education, approved by the Government of the Republic of Moldova no. 482 of 28 June 2017.	2. Equivalent models, sem. II + project	10	
		3. Basics of application development, sem. III + project	10	
		4. Elaboration of domain specific languages, sem IV + project	10	
		5. Developing secure applications, sem V	10	
		6. IoT projects, sem.VI	10	
		7. Design of information systems, sem. VII	10	
Total ECTS disciplines based on PBL			70	29,2
Public health (SUMPH), multidisciplinary course ”Neuroscience”		Multidisciplinary course of ”Neuroscience”	4	

5.2 ROADMAPS

In order to implement the pilot programmes with the application of the PBL method, each University in Moldova, partner in the project, developed its own ***roadmap***, which represents a consolidated list of objectives, measures, actions and arrangements necessary to be carried out at the institution, faculty and/or department level, as well as the terms of their implementation.

By conducting a comparative analysis of these documents, we present a synthesis of the structure of the roadmaps of the partner universities in RM.

Table 4. Synthesis of universities' roadmaps structure

Objectives	Actions
1. Elaboration of the educational plans for the pilot programmes	1.1. Establishment of working groups for the elaboration/modification of the plan for the pilot programme
	1.2. Assessment of the economic and social sector expectations regarding programme outcomes
	1.3. Analysis of similar European / international programmes using the PBL method, including through study visits to partner universities in the EU
	1.4. Evaluation of the necessary and existing resources
	1.5. Determining the structure of the plan, taking into account the introduction of the project as a learning activity
	1.6. Adjustment of the educational plan according to the framework plan developed by the MECC
	1.7. Approval of the modified plan at the meeting of the faculty council and the Senate
	1.8. In the case of the elaboration of the new educational plan (Software engineering, TUM), obtaining the authorization for provisional operation from ANACIP
2. Preparing teachers to apply the PBL method in pilot programmes	2.1. PBL training provided by EU partners for teachers from RM universities, members of working groups within the project (Trainings for trainers)
	2.2. Mobility of a group of academics, involved in the pilot programmes, at partner universities in the EU
	2.3. Trainings / seminars (at institutional level) for teachers on problem-based learning, student assessment etc. provided by members of the working group
3. Elaboration of educational documents	3.1. Adjustment of academic curricula to PBL requirements (for years II and III of studies)
	3.2. Elaboration of educational documents: guidelines, case studies, assessment, etc.

4. Organization of the Admission 2017 and launching of the pilot programmes	4.1. Campaign to promote the programme: - production of advertising leaflets; - visits to high schools, - institutional websites; - advertising websites (www.studentie.md, etc.)
	4.2. Organization of admission to pilot programmes. Formation of academic groups.
	4.3. Study programme deployment
	4.4. Monitoring and improvement of the pilot programme: undertaking corrective and preventive actions
5. Preparing the physical environment for organizing studies in pilot programmes	5.1. Procurement (from the project budget and from the university's own budgets) and installing the necessary equipment to ensure the study process, including for group work.
	5.2. Repair and / or arrangement of study rooms / for group work, etc.
6. Extending the project to other study programmes within the institution	6.1. Dissemination of good practices of the implementation of the PBL method
	6.2. PBL trainings / seminars for academic staff from various training areas / study programmes

The universities' roadmaps were structured by ***objectives*** to be achieved through a series of actions identified by the institutions.

Objective 1. *Developing / modifying educational plans for pilot programmes*. The experience studied in the partner universities of the European Union, but also the legislative and normative acts regulating the activity in higher education in the Republic of Moldova were taken into account for their development. At the same time, some proposals have been made to amend some of the provisions of the Normative Acts in force, in order to be able to carry out the activity within the pilot programmes under the regulatory conditions.

Objective 2. *Training of teachers for the application of the PBL method within the pilot programmes*. In this respect, the teachers who will implement the PBL-based programmes participated in the trainings organized within the project. Also, some teachers will benefit from academic mobility at partner universities in the European Union, where they will be able to familiarize themselves with the model of applying the PBL method in the training area concerned. Within each higher education institution of the RM, partner in the project, a series of trainings for teachers on problem-based learning, evaluation of student activity, etc. will be organized.

Objective 3. *Elaboration of educational documents*: curricula on disciplines (analytical programmes), guidelines, case studies, problem sets, assessment, etc. Adaptation of theoretical and practical courses to the new requirements.

Objective 4. *Organisation of Admission to the pilot programmes (2017).* In this respect, information leaflets will be prepared about the pilot programmes, which will be disseminated in the advertising campaign in the country’s high schools. The information will also be made public on the websites of universities.

Objective 5. *Preparing the physical environment* for organizing studies. Each university will use all the facilities at their disposal: study rooms, literature, access to databases, free LAN and WI-FI for students and teachers, etc. Also, from the sources of the project, with the co-financing from the universities, the necessary equipment for the implementation of the pilot programmes will be procured. Also, the sets of manuals and publications dedicated to the PBL method, purchased under this project, have been sent to university libraries.

Objective 6. *Extending the project to other specialties within the partner universities*. Activities related to the dissemination of good practices for the implementation of the PBL method, including those acquired during the implementation of the pilot programmes. In this respect, the websites and the university newspapers will be used, where the information about the project will be published, the members of the project teams will participate with speeches at different didactic-scientific conferences, workshops, will elaborate articles to be published in scientific journals across the country. Seminars / trainings will be organized for teachers from all faculties of the university interested in applying the PBL method.

All activities mentioned in Table 4 will require certain resources. The necessary financial resources will be partially covered by the project budget (mobility of teachers and students, procurement of equipment, etc.), but also from the institutions' own budgets (organizing trainings with teachers, making repairs, procuring equipment, etc.).

In the process of drafting the educational plans for the pilot programmes, most higher education institutions faced some restrictions within the normative framework which limited the level of implementation of the PBL method in these programmes. In order to facilitate the implementation of the PBL and other student-centered methods in the study programmes, the higher education institutions have formulated a series of proposals to amend the normative framework, reflected in the table below.

Table 5. Regulatory provisions necessary to be amended

Article	Provision	Proposals
Framework-plan for higher education, art. 9	It is recommended to allocate 4-6 study credits for a module.	To exclude this provision
Framework-plan for higher education, art. 9	At **cycles I and II**, the course unit/discipline can be accomplished through the **auditorium didactic activity** (direct contact): classes/lectures, seminars, laboratory work, practical work, design work, teaching, clinical internships and other forms approved by the Senate; as well as **non-auditorium didactic activity**: didactic-artistic or sporting activities; *year, bachelor, master projects/theses*; individual activity, social and community activities, other activities provided for by the institutional regulations.	To add to the auditorium didactic activity the supervision of the team activity of the students
Framework-plan for higher education, art. 28, E)	A Physical Education course for students of the years I/II, that are not quantified with credits, but whose evaluation with "admitted" is a precondition for admission to the completion exam of bachelor's degree studies	To exclude the Physical Education course

Regulation on the organisation of studies on the basis of SNCS, art. 20	For programmes of 180 credits, a year thesis is done in the year II of the studies. For study programmes of 240 credits, one year thesis is done in the years II and III of studies.	To exclude the limitation to a single project

Universities also mentioned the need to prepare didactic materials, case studies that would allow for better understanding of the essence of using PBL, the role of the teacher, the role of the student, what does teamwork involve?, how is sharing of responsibilities done?, how is the assessment done?, etc.

Table 6. Synthesis of universities' roadmaps structure

	Implementation actions	Implementation deadline					
		AESM	SUARB	SUC	SUM	SUMPh	TUM
Elaboration of the educational plans for the pilot study rogrammes							
1.1.	Establishment of the working group on the elaboration/modification of the study programme	December 2016	December 2016	December 2016	December 2016	December 2016	December 2016
1.2.	Assessing the expectations of the economic and social sector on programme outcomes	January – March 2016	February-April 2017	January-March 2017	February-April 2017	January – April 2017	January-March 2017
1.3.	Analysis of similar national, European and international programmes, including study visits to EU partners	January – June 2016	January – June 2016	January-March 2017	January-March 2017	January-March 2017	January-March 2017
1.4.	Evaluation of the necessary and existing resources	September 2016	October-November 2016	September – October 2016	September – October 2016	September – October 2016	September – October 2016
1.5.	Determination of the structure of the plans, taking into account the introduction of the *project* as a study activity.	September – October 2016	September 2016-January 2017	March – April 2017	April 2017	March – April 2017	January – March 2017
1.6.	Adjusting the educational plan in accordance with the framework-plan	April 2017	April 2017	May-June 2017	March-April 2017	April-May 2017	December 2016
1.7.	Approval of the amended plan at the meeting of the Faculty Council and the Senate	April-May 2017	April-May 2017	April – May 2017	May-June 2017	May-June 2017	December 2016
1.8.	Monitoring and improvement of the Pilot Programme: undertaking corrective and preventive actions	During the study year 2017-2018	During the study year	During the study year 2017-2018	During the study year	During the study year	During the study year
Training teachers to apply the PBL method in pilot programmes							
2.1.	Training on PBL, offered by EU partners for teachers from universities in RM (Trainings for trainers)	February 2017	February 2017	February 2017	February 2017	February 2017	February 2017

2.2.	Mobilities of the academic staff, involved in the pilot programmes, at EU partner universities	Over the years 2016-2017	Over the years 2016-2017	Over the years 2016-2017	Over the years 2016-2017	Over the years 2016-2017	Over the years 2016-2017
2.3.	Trainings/seminars (at institutional level) for teachers on problem-based learning, evaluation of student activity, etc.	In January of each year, starting with 2017			May 2017 January 2018		
Elaboration of educational documents							
3.1.	Adjustment of academic curriculum to PBL requirements (for year I of studies)	April-June 2017	April-June 2017	June – August 2017	June – August 2017	June – August 2017	March – June 2017
3.2.	Elaboration of educational documents: guidelines, case studies, evaluation etc.	September 2017-June 2018	During the academic year	September 2017-June 2018	December 2017	September 2017-June 2018	September 2017-June 2018
3.3.	Adjustment of academic curriculum (for year II and III of studies)	September 2017-June 2018	April-September 2017	June – August 2017	June-September 2017	June-October 2017	March-August 2017
Organizing Admission 2017 and launching pilot-programmes							
3.4.	Programme promotion campaign: - developing advertising flyers; - visits to high schools, - institutional websites; - advertising websites (www.studentie.md etc.)	February – May 2017	March – June 2017	March – June 2017	March – June 2017	March – June 2017	March – June 2017
3.5.	Organizing admission. Formation of academic groups, which will learn according to Pilot-programmes	July-August 2017	July-August 2017	June – August 2017	July-August 2017	July-August 2017	July-August 2017
3.6.	Deployment of the study programme	September 2017 – June 2020	September 2017 – June 2020	September 2017 – June 2020	September 2017 – June 2021	February 2018	September 2017 – June 2021
Preparing the physical environment for organizing studies in pilot programmes							
4.1.	Purchase and installation of the necessary equipment	July-August 2017	June-August 2017	March-June 2017	August 2017	July-August 2017	July-August 2017
4.2.	Repair and arrangement of study halls/for group work, etc.	July-August 2017	May-July 2017	March-June 2017	May-July 2017	May-July 2017	May-July 2017

Expanding the project to other study programmes within the institution							
5.1.	Dissemination of good practices regarding the implementation of the PBL method	During the entire period	During the entire period	During the entire period	During the entire period	During the entire period	During the entire period
5.2.	Trainings/seminars with reference to PBL for academic staff from various training areas/study programmes	September 2019	Starting with 2018	June-August 2017	Starting with 2018	Starting with 2018	Starting with 2018

This synthesis can be complemented by some specific steps that TUM is about to make with the Software Engineering specialty. This is due, as mentioned above, to the fact that the specialty is a new one, not existent in the Nomenclature of 2005.

Thus, we mention the following specific activities necessary to be additionally done only at the specialty Software Engineering

- This specialty is a new one, which is not in the *Nomenclature of professional training areas and specialties of 2005*, and, for this reason, it must be introduced and approved in the new *Nomenclature of professional training areas and specialties of 2017*.
- Internal evaluation (self-evaluation) of the study programme for the authorisation of provisional operation
- External evaluation of the study programme for the authorisation of provisional operation by the National Agency for Quality Assurance in Professional Education (ANACIP) based on the analysis of the self-evaluation report of the programme.

6 CONCLUDING REMARKS

The Competences of the 21st century require the implementation of a training that allows students to apply the content of the courses, to participate actively in their learning, to make meaningful use of technology and to collaborate.

PBL is a student-centred, research-based training model in which the student engages with an authentic, poorly structured problem that requires a more thorough research[15]. Students identify the gaps in their knowledge, conduct research and apply what they have learned to develop solutions and present their findings [16]. Through collaboration and research, students can cultivate problem solving[17], metacognitive skills, commitment to learning, and intrinsic motivation.

Problem-based learning (PBL) is not only a method or a mere teaching theory, but a new philosophy, a rethinking of the whole teaching-learning process, of the relationship between teacher and student. The PBL model in its classical form has been applied over several decades at the University of Aalborg, but also at other European universities, demonstrating its efficiency, largely due to the high degree of employability of graduates. Today, the PBL model is internationally recognized, with a particular interest for universities, researchers and students in many countries.

Following the completion of this report, we have concluded that teaching approaches with widespread use of active teaching methods, especially PBL, are useful for implementation in all specialties analyzed, at least for the following reasons:

1. Closer working with potential employers would have a positive impact not only on the process of designing the study programme or the curriculum of disciplines, but also increasing the employability chances of graduates.
2. Students will be motivated to study the theoretical aspects of the disciplines in order to identify the relevant institutions to solve the problem.
3. The necessary changes to the application of the PBL would make the contents of the disciplines more interactive and raise the responsibility of the students to the training in the specialty, will contribute to students' training of critical analysis and information synthesis skills, abstract thinking, assessment of competing arguments and decision-making in solving problems. All these skills are essential for the areas concerned in the report.
4. Strengthening teamwork and, as a result, students will become more open-minded to each other and support each other during their studies.
5. Students will be more actively involved in curricular design.
6. Academic staff will become more visible outside the university community due to active involvement in determining the external organisations they will collaborate with.

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[16] Barrows, H.S. (1996). Problem-based learning in medicine and beyond: A brief overview. In L. Wilkerson, & W. H. Gijselaers (Eds.), *New directions for teaching and learning*, No.68 (pp. 3-11). San Francisco: Jossey-Bass.

[17] Norman, G. R., & Schmidt, H. G. (1992). The psychological basis of problem-based learning: A review of the evidence. *Academic Medicine*, 67(9), 557-565.

7. The study programme (specialty) will have a relevant impact in society due to the collaboration and direct involvement of external organisations.

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Annex 1. AESM WP3: Bachelor's degree studies in Business and Administration: The student-centred active learning pilot programme

The report was elaborated by the project team from the Academy of Economic Studies of Moldova and can be found in the full version at

http://www.pblmd.aau.dk/fileadmin/user_upload/WP3_BA_ASEM_engl.pdf

Annex 2. SUARB WP3: Bachelor's degree studies in Public Administration: The student-centred active learning pilot programme

The report was elaborated by the project team from the State University „Alecu Russo" of Balti and can be found in the full version at

http://www.pblmd.aau.dk/fileadmin/user_upload/WP3_AP_USARB_engl.pdf

Annex 3. SUC WP3: Bachelor's degree studies in Entrepreneurship and Business Administration: The student-centred active learning pilot programme

The report was elaborated by the project team from the State University of Cahul and can be found in the full version at

http://www.pblmd.aau.dk/fileadmin/user_upload/WP3_BA_USC_engl.pdf

Annex 4. SUM WP3: Bachelor's degree studies in Law: The student-centred active learning pilot programme

The report was elaborated by the project team from the State University of Moldova and can be found in the full version at

http://www.pblmd.aau.dk/fileadmin/user_upload/WP3_DREPT_USM_engl.pdf

Annex 5. SUMPh WP3: Bachelor's degree studies in Public Health: The student-centred active learning pilot programme

The report was elaborated by the project team from the University of Medicine and Pharmacy „Nicolae Testemitanu" and can be found in the full version at

http://www.pblmd.aau.dk/fileadmin/user_upload/WP3_Medicine_SUMF_engl.pdf

Annex 6. TUM WP3: Bachelor's degree studies in Software Engineering: The student-centred active learning pilot programme

The report was elaborated by the project team from the Technical University of Moldova and can be found in the full version at

http://www.pblmd.aau.dk/fileadmin/user_upload/WP3_IT_TUM_engl.pdf

Annex 7. Template methodology

Each Task Force Team will store all collected data files in the project intranet https://pblmd-moodle.samf.aau.dk/. Task Force leaders are to make sure all data files and documents are stored in the project intranet.

1. Institutional fit-for-purpose

This part is concerned with exploring the relationship between internal university structures and study programmes, incl., how study programme development and support are integrated throughout the entire university. The cohesion of study programme development and support will be examined at university management, faculty/department, as well as the study board levels. Issues related to the integration of disadvantaged group of students as well as to available physical environment will be explored.

Each Task Force Team will employ this part of the methodology to develop a benchmark understanding of how student-centred teaching and learning at EU partner universities is imbedded into and related to overall institutional structure and later to explore the same relationship, fit-for-purpose at own universities.

NOTE: the questions below are separated into 6 levels; there might be an overlap between the levels. It is important when asking a question to consider its relationship with other levels and impact it might have on other areas within and across the levels.

System level:

- Does the University have power/authority to accredit/validate its own degrees? If so go to section below.
- If not what is the external process?
- What is the legal status of the accrediting body? How is it composed? Does it publish a guide and criteria for accreditation? Is this publicly available? Ask for a copy and include an analysis of key elements in your report.
- Does accreditation happen periodically? Is there a fast track for new degrees/areas of study? How long does the normal process take? Is accreditation institutional or subject based?
- How is it regarded by stakeholders?
- Is there a national system of Quality Assurance? Is it independent of accreditation? What is the legal status of the QA body? How is it composed? Does it publish a code of practice? If so obtain a copy or access and include an analysis of key elements in your report.
- How does the national QA body influence curriculum development and internal quality assurance? How is it regarded by stakeholders?
- Are there national subject benchmarks or equivalent which programmes have to address?[18]

[18] In the UK, and probably elsewhere, there are certain guidelines and constraints exercised from outside the HEI. These might be professional bodies (e.g. in the case of Law in England, where any qualifying Law degree has to be validated by the Law Society); government agencies (e.g. the subject benchmark statements provided by HEFCE); or other

- Are there any relevant guidelines or benchmark statements provided by government agencies which constrain or otherwise affect the delivery of programmes? Explain whether these benchmarks refer to the content, delivery or assessment of the programme.
- Which professional bodies have some input into the validation or oversight of the programmes and how are these processes carried out?
- Which external validating agencies are involved in the design of the programmes and how is this achieved?
- What are the arrangements for dual awards or professional recognition?

University management level:

- What is the governance, management and organizational structure of the university?
- Is there a University institutional strategy which incorporates a curriculum strategy with a focus on student centred learning or is there a separate curriculum (learning and teaching)strategy? Is there an institutional commitment to innovative learning and teaching, greater use of ITC, a focus on employability, internationalisation of the curriculum? Language acquisition, inter-cultural skills? Obtain or access the documents and include an analysis in your report?
- What is the key university structure/committee responsible for student-centred teaching and learning? What are its terms of reference? What is its membership?How often does it meet? Are there provisions for fast tracking urgent curriculum development? What delegated powers does it have and to which body is it accountable? Does it produce regulations/good practice guides for curriculum proposals? What is the relationship of this body to Faculties/ Schools/ Departments / Colleges in the University?
- Is there a separate committee and/or office for internal quality assurance and enhancement? What are its responsibilities and how is it resourced (number and level of staff full/part-time, academic or administrative?
- At what level in the University curriculum proposals can be initiated and possibly a definition of the various bodies to be sure that there is a consistent understanding of terms? If necessary, for each university create a Glossary of terms and respective provide definitions.
- What other bodies have an influence on curriculum development and approval e.g. Is there a requirement for a business case for all new programmes? Would the business case have to demonstrate how the proposal fits the University strategic plan? Which committee or senior manager needs to approve the business plan? Would service departments such as e.g. Finance, Estates, Library, Careers, Legal, Ethical expect/require to be consulted?]
- What learning and teaching and assessment approaches are used at the university? What differences are there between and/or within different subject areas/faculties?
- Is there an institutional graduate school? Does it have responsibility for both second and third cyles? What are its terms of reference? How does it relate to other bodies responsible

validating agencies (e.g. EDAMBA etc.). This can be significant because these agencies sometimes dictate the curriculum and the assessment style (e.g. insisting on exams).

for curriculum approval? [You might want to develop this with more on Doctoral Schools/Programmes]

- What public/published information is available on all aspects of the University curriculum policy and content? Is this available on the web site with open access? The content should be reviewed as part of the benchmarking.
- Do descriptions of programmes and modules contain clear statements of intended learning outcomes? Learning methods, assessment and assessment criteria? Do programme descriptions indicate potential employment routes post-graduation? Who monitors/is responsible for ensuring this?
- Are academic staff required to have a formal 'teaching' qualification? If so what bodies offer/validate the qualification? What formal requirements are there for continuing staff development and training? How is this monitored and assessed? Which body in the University has responsibility for this? Is the University Human resource department engaged in academic staff training and development? What standards are followed in pedagogical training of academics? Are there national common guidelines, pedagogical standards/methodologies to be followed? What training courses are organized for staff teaching skills development?
- How are students represented at the university level? What role do students play in the governance, management, organisation of the University? Note: it is important to understand how the students are appointed/ nominated to the relevant bodies and how they report back to their constituency.
- What KPIs are typically used at university level in relation to resourcing teaching and learning (such as, SSRs (staff student ratio); spend per student on library resources; time allowances for teaching and assessment; average class size etc)?
- What is the role of the students' union in the student-centred teaching and learning?
- How is student-centred teaching and learning supported by the university's mission statement?
- How, if at all, is student-centred teaching and learning promoted throughout the university?
- What is the role of continuous professional development (CPD) in supporting studentcentred teaching and learning?
- What financial or administrative support is provided at university level to support student-centred teaching and learning approaches? These might include funding for pedagogic research, curricular development projects etc. and might be provided through central funds or through specific research units with budgetary autonomy.
- What is the overall leadership structure at university level for academic programmes including teaching, learning and assessment?

Faculty/department level:

- What are the communication structures and relationships between the higher management level at the university and the level of faculty and/or department related to student-centred teaching and learning?
- What is the role of faculty and/or department in the new study programme development?
- How do faculty share and access examples of good practice within departments?

Study board level:

- What is the structure and relationship of a Board of Studies (or other level) with the department, faculty and research centres within department?
- Is there a procedure for inter-disciplinary or multi-disciplinary programmes? Does this require the establishment of unique committees/boards and how do these relate to the overall structure? Are there problems in establishing such degrees? What are the problems?
- In depth review of assessment practice: the use of innovative methods of assessment e.g. peer assessment, the role of formative and summative assessment, types of assessment, blind and double marking, monitoring of assessment to ensure that it is effective in relation to the achievement of learning outcomes, mark distribution analysis both within a subject and between other subjects (i.e. across the University) to ensure equity and comparability, use of external examiners, marking systems with a clear definition of criteria (Note: the integration of assessment into the process of student centred learning and its relationship with learning outcomes is critical).
- What is the process for (a) the approval of a new degree programme – is there any difference between first cycle, second cycle and third cycle? (b) the approval of a new module in an existing degree? What level of change, enhancement in a degree programme or a module requires full institutional approval? How long does the process take for each of these? Note: Understanding the approval cycle is important.
- What role do students play in curriculum planning and development? Is there a difference in their role between the cycles? Note: it is important to understand how the students are appointed/nominated to relevant bodies and how they report back to their constituency.
- What procedures (if different from above) exist for developing new study programmes?
- How is e-learningimplemented and to what extent is it embedded within the programmes?
- How are staff members involved in managing and coordinating a particular study programme (programme coordinators, semester coordinators, supervisors)? How is this formalized?
- What is the process for annual monitoring and periodic review of programmes?
- Are there any performance indicators?
- What is the process for student feedback? How is this managed and what impact does it have? Does it result in feedback on outcomes to the students?

Integrating disadvantaged groups of students:

- Does the University have an office/staff dedicated for students with a disability? What are the responsibilities and resources of the office?
- What special arrangements are made for students with a disability (incl., according to UN Convention on the Rights of Persons with Disabilities)?
- What are the capacities of the university to work with students from disadvantaged backgrounds with regard to teaching approaches?
- What special approaches exist that are targeted at socially disadvantaged students?
- What approaches are followed for inclusion of students from non-academic backgrounds, if any?

- What academic support is available to students with learning disabilities?

Physical environment:

- Is the physical environment suitable/adapted for students with a physical disability? Is there a programme of adaptation for students with a physical disability?
- What student facilities exist that support student-centred teaching and learning: study group rooms, common rooms for students, extended university library opening hours, free Wi-Fi on campus, IT assistance for students.

2. Study programme fit-for-purpose

This part is concerned with exploring a current study programme structure at each EU partner University with the focus on operational, functional details, normative and technical details. The level of analysis is a particular study programme.

Each Task Force Team will employ this part of the methodology to develop a benchmark understanding of structures, procedures and process related to the development and management of study programmes in EU partner universities as well as explore the same at their own university in respective pilot study programme.

Study programme level:

- To what extent does it reflect the institutional strategy? [See also above]
- To what extent does it reflect subject benchmark statements of the equivalent?
- Is it competence based?
- Does it focus on 'employability'?
- Is it subject to professional or regulatory accreditation (particularly important for Medicine but probably the case for other subjects)
- Does it emphasize innovation, research led learning, entrepreneurship, internationalization?
- To what extent does it use IT and/or blended learning?
- What is the structure of the chosen programme? (workload, semesters, modules, student evaluations, staff evaluations, learning progression). It would be useful to determine whether this process applies to second cycle as well?
- How is the programme developed, enhanced and managed? What role do students play in the process? What role do employers play? Are other stakeholders consulted/engaged?
- Are former graduates/alumni consulted/engaged?
- What are the functions of the project coordinator, semester coordinator, teaching staff at the programme?
- What supporting documents exist in relation to the study programme? (course description, study regulations, guidelines, learning outcomes, evaluation guides). Are these publicly available?
- What are the existing programme regulations and who is responsible for ensuring that they are followed?
- How are the programme structure and content monitored, reviewed, enhanced and implemented?

- How is staff workload calculated and monitored? How is the norm for allocation of hours (academic staff related) for various types of activities (teaching, supervision, evaluation) calculated (ECTS, formula, or historical)?
- How is student workload calculated and monitored and how does this help to shape curriculum planning and development?
- What are the expected learning outcomes? How are the learning outcomes reflected in the assessments? How are the learning outcomes communicated to the students and how are they assessed?
- How is the student evaluation/assessment conducted? What forms of evaluation are practiced? (Written exams/open questions, multiple choice tests, oral exams, project presentations. Are there innovative forms of assessment e.g. peer assessment, IT based?)
- What are the progression requirements?
- What measures are taken to avoid and sanction 'cheating' and plagiarism? How are these recorded and evaluated?
- What are provisions for student appeals?
- What is the existing system of grading? What are the arrangements for credit transfer and accreditation of prior learning?
- What is the role of the external examiner?
- How is student-mobility embedded in the programme structure and how it is facilitated?
- How is the stuff evaluation/feedback conducted by the students? How are the outcomes of feedback managed?
- What are the academic requirements for students to enter the programme?
- How do students contribute to the curriculum development?
- How are the programmes supported by administrators and what responsibilities do administrators have in directly supporting students? (e.g., answering enquiries; administration of assessments; managing academics' diaries etc.).
- Is the employment of graduates monitored? If so how and over what period?
- Which software, e-learning (e.g. Moodle, MOOC's, Knowledge Apps, moderated forums), how it is used, what checks there are for plagiarism.

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Introducing Problem Based Learning in Moldova: Toward Enhancing Students' Competitiveness and Employability

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Business and Administration: Student-Centered Active-Learning Study Programme

Academy of Economic Studies of Moldova

Work Package 3

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Chisinau, 2017

Executive summary

This report presents Work Package 3. The purpose of this Package has been to conduct a study on the implementation within the Academy of Economic Studies of Moldova (AESM) of Problem Based Learning (PBL). In order to achieve the proposed goal, according to a methodology elaborated in the project, the system of higher education in the Republic of Moldova in general and the AESM in particular was analyzed. The analysis was carried out following the same methodology, the same levels and the same criteria as in Work Package 2, where the analysis of the education system in Denmark and Great Britain, and the Aalborg (AAU) and Gloucester (UoG) universities, respectively was performed.

Particular attention was paid to studying the "Business and Administration" study programme at AESM and comparing, according to some indicators, the similar programme at the Universities of Aalborg and Gloucester.

As a result, we did the cross-analysis for the proposed indicators for all three universities, we highlighted some common moments, but also the peculiarities that appear. We have found that the particularities are largely determined by the customs, the traditions existing in that country, the mentality, but also by some legislative and normative acts, by the degree of academic freedom that the universities have.

Following the analysis, we have developed a study programme outline for the „Business and Administration" specialty at AESM that will be implemented from 1 September 2017.

In its elaboration, we started from the experience of the universities in the European Union, analyzed in the Work Package 2, from the current educational plan of the mentioned specialty, from observance of certain statutory provisions existing in the Republic of Moldova. We have developed the Roadmap, which is an action plan, in order to implement this plan, indicating both the measures and the deadlines, the necessary resources, the responsible persons.

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INTRODUCTION

The Moldovan higher education is in a continuous change, at the moment, these changes are meant to bring it to the highest level, as competitive as possible with the ones of the European countries. In this Report we highlighted the existing situation in the field based on the example of the Academy of Economic Studies of Moldova. The Bachelor's degree study programme at cycle I, „Business and Administration", served as a research subject.

A major concern was to use and capitalize on a current, top-level bibliography, the research of internationally recognized specialists with reference to the use of student-centered learning methods in general and problem-based learning in particular. In this regard, the team members studied a set of books on the use of Problem-Based Learning (PBL), the analysis of which is presented in Chapter II of the Report.

We have also focused greatly on practical aspects, studying the legislation and the multiple normative acts that regulate the didactic activity of the universities, which represent a consistent, appreciable part of the volume of the work.

The purpose of this Report is to carry out an extensive analysis of the higher education system in the Republic of Moldova and, in particular, the Academy of Economic Studies of Moldova, based on the methodology elaborated within the project. The methodology was also applied in Work Package 2 to develop a similar report for the Danish university system (based on Aalborg University) and the UK university system (based on Gloucester University). As a result of the comparison of the elements of the methodology used in the European and Moldovan universities, a modified educational plan for the Business and Administration specialty, which will be based on the use of PBL, has been proposed.

Table 1. Team responsible for the study programme

Nr. d/o	Name, surname	Title, function in AESM	Position in the team
1.	Cotelnic Ala	University professor, First vice-rector resdponsible for the teaching activity	Team leader
2.	Solcan Angela	Associate professor, Dean of the Faculty of Business and Business Administration	Team member
3.	Gaugaș Tatiana	Lecturer, Department of Marketing and Logistics	Team member
4.	Țîmbaliuc Natalia	Lecturer, Department of Management	Team member

1 REVIEW OF LITERATURE AND SYNTHESIS OF SOURCES

1.1 INTRODUCTION

The use of student-centered methods, and especially problem-based learning, requires a deeper study of this method. A starting point was the study of the method during the study visits that the project team had in the universities in the member countries of the given project. The study of bibliographic sources with reference to this topic is of great importance as well. In this regard, they have been consulted, and we will continue to briefly review the key elements of the following sources:

1. *The Power of Problem-Based Learning: A Practical "How to" for Teaching Undergraduate Courses in any Discipline*/edited by Barbara J.Duch, Susan E. Groh and Deborah E. Allen
2. *Psychology for Psychologists: A Problem Based Approach to Undergraduate Psychology Teaching*/ edited by Alexia Papageorgiou, Peter McCrorie, Stelios Georgiades and Maria Perdikogianni
3. *Problem- based Learning Online*/ edited by Maggi Savin-Baden and Kay Wilkie
4. *New Aproaches to Problem-Based Learning: Revitalising Your Practice in Higher Education*/ edited by Terry Barrett and Sarah Moore
5. Problem-Based Learning: Case Studies, Experience and Practice/ edited by Peter Schwartz, Stewart Mennin and Graham Webb
6. *Teaching for Quality Learning at University: What the Student Does*, 4th edition/ edited by John Biggs and Catherine Tang

The books analyzed are particularly important and useful for teachers and management staff in the academic environment. The latest tendencies in higher education show an increasing focus on the responsibility of teaching, so the teaching process is not only seen as the individual responsibility of the teacher, but as a responsibility of the entire institution, with policies, staff development strategies and quality assurance methods of the teaching process. Being concerned with improving the teaching process, many universities create and fund staff development centers or teaching and learning centers and focus on research into the enhancement of teaching quality in higher education.

The authors of the book „*Teaching for Quality Learning at University: What the Student Does*", John Biggs and Catherine Tang, claim that one of the best ways to improve the teaching process is changing the emphasis from teacher to learner, i.e. clear definition of learning outcomes that students should achieve at the end of the subjects taught by teachers. In this context, the book builds on the concept of *constructive alignment*, used in the implementation of results-based learning. The *constructive alignment* identifies the learning outcomes to be achieved and helps teachers to develop teaching-learning activities that will help students achieve these results and be able to assess how well these outcomes have been achieved. Each chapter includes tasks that provide ideas and recommendations on how constructive alignment can be implemented. Another advantage of the book is that it includes a wide variety of fields and disciplines, as well as examples from the authors' experience in implementing constructive alignment in different countries: Australia, Hong Kong, Ireland, North America, etc.

The book „*New Aproaches to Problem-Based Learning: Revitalising Your Practice in Higher Education*", edited by Terry Barrett and Sarah Moore, is an excellent professional guide that embraces various aspects of PBL. The PBL method, being a pedagogical approach, has the ability to promote an active learning method within the upper school. The basics of PBL are to create real problems for students who will work in small teams.

The book describes in detail the practices of several higher education institutions in the world on the involvement of students, teachers and other stakeholders in the use of PBL. All approaches with regard to PBL are focused on the potential of the method to revitalize teaching and learning methods in higher education institutions.

The book consists of 20 chapters, which are grouped in three parts:

1. *Stakeholders designing PBL initiatives* (chapters 1-8);
2. *Students using PBL to enhance capabilities* (chapters 9-14);
3. *Sustainability and building capacity in PBL initiatives* (chapters 15-20).

The reference work „*The Power of Problem-Based Learning: A Practical "How to" for Teaching Undergraduate Courses in any Discipline*" / *edited by Barbara J.Duch, Susan E. Groh and Deborah E. Allen* emphasizes that transformations that take place in various fields of activity are undoubtedly reflected in the higher education system. Fast changes in the business environment, ubiquitous access to information, cutting-edge technology, all set requirements regarding acquiring and transmitting knowledge in universities. Any change in society imposes its requirements on the education system as it provides a basis for its further development, laying the foundations for the formation of a certain vision, perceptions and, ultimately, prosperity.

It was in 1994, in Wingspread (USA), within a joint conference organized by state and federal authorities, representatives of corporations, philanthropists, representatives of higher education and accreditation institutions, when a list of the most important qualities necessary for a college or university graduate was elaborated:[1]

- High level of communication skills, use of modern technologies and finding of information, which can be used when needed,
- Ability to make informed decisions - in other words, to effectively identify the problem, collect and analyze information on this problem and identify solutions,
- Skills to operate within the global community by possessing various abilities, including adaptability, flexibility, diversification, persistence - for example, in self-organization, ethical and social development, creativity and ingenuity, teamwork,
- Technical competence in his/her field of activity,
- Ability to use the above mentioned features to solve concrete problems in complex real world conditions.

[1] The power of problem-based learning: a practical "how to" for teaching Undergraduate Courses in Any Discipline", edited by Barbara J. Duch, Susan E. Groh, and Deborah E. Allen, 2001, p. 4-5

All these qualities establish the need to change the traditional training style in favor of new methods, focused on the acquisition by students of skills to identify, analyze and solve concrete problems.

The book „*Problem-Based Learning case studies, experience and practice*" by *Peter Schwartz, Stewart Mennin, and Graham Webb* is addressed to people who already use the PBL and those for whom this method is still unknown . Thus, for the more „experienced" readers, the book can serve as a source of inspiration in the application of PBL, and for those who are faced with learning through PBL for the first time, the work provides a series of instructions that will facilitate successful understanding and development of a new PBL teaching and learning strategy.

The main objective of this paper is to help readers acquire a bag of knowledge and skills based on the experience experienced by the teaching staff who applied the PBL methodology in their work, in the light of specific situations and cases presented in the paper[2].

This book summarizes a significant number of *22 case studies written by 37 teachers from 6 countries, who specialize in various fields of science such as medicine, dentistry, biomedicine, natural sciences, architecture, engineering and optometry*. Common to these cases is that they present some of the most important and frequently encountered difficulties and challenges that may arise in applying the PBL method.

The case studies presented in this book are focused on problems in three core areas, which are divided into 3 sections, namely[3]:

1. political / administrative / resource problems (there are 8 case studies on this topic in the book);
2. teacher-related problems, including their perception of this method, defining their role in PBL, and teacher training for PBL (7 case studies on this subject);
3. student related problems, including their perception of the PBL method, classroom activities / dynamic / difficulties and student performance assessment (7 case studies on this subject are presented).

Case studies are made up of at least two parts, each ending with questions for readers. Thus, the reader is invited to take over the role of the author and to reflect on what actions are to be undertaken after he / she becomes aware of the circumstances of the first part of the case study. Moving forward in reading, the reader discovers what has really been done in each case to apply the PBL method.

The book „*Psychology for Psychologists: A Problem Based Approach to Undergraduate Psychology Teaching*", *edited by Alexia Papageorgiou, Peter McCrorie, Stelios Georgiades and Maria Perdikogianni,* is structured in 6 basic chapters, List of Tables and Figures, Preface, References, and Index. The basic compartments have been titled: Developing Bachelor's degree studies in psychology and the need for change; Problem-based learning; Evaluating students'

[2]Problem-Based Learning: Case Studies, Experience and Practice/ edited by Peter Schwartz, Stewart Mennin and Graham Webb, p.6

[3] idem, p.6

knowledge in a problem-based study programme; Problem-based learning study programme in psychology; Examples of problem-based learning case studies in psychology; Epilogue.

The paper includes a detailed description of the emergence and development of psychology as a subject of study. The book highlights the etymology of the word „psychology"[4] (Friedman 2013, Kant 1786), and the establishment of psychology as an independent study subject in medical sciences [5] (Thijssen, Luthy 2012).

Further, the authors highlight the research branches of psychology and the emergence of university / academic discipline called „Psychology"[6] (Fuchs 2012). The analysis continues with the identification of the early stages of establishment of higher education in psychology and their development at present [7] (Brewer 1997). It is worth mentioning the changes that the study discipline of psychology currently undergoes, namely the role of higher education in the training of future specialists in psychology[8] (Trapp 2011). Last but not least, the authors highlighted the disadvantages and limitations of current studies in psychology and emphasized the need to change the teaching system to improve the training of future psychologists as professionals[9] (Goedeke 1997).

The book „*Problem- based Learning Online / edited by Maggi Savin-Baden and Kay Wilkie*" offers an optimal solution to the challenges that arise between modern learning technologies and their complicated association with psycho-pedagogical approaches in the educational field.

The purpose of this book is to provide effective solutions for the implementation of the problem-solving oriented training system through information technologies and the information space.

The main objective is to convince the specialists of different educational institutions to opt for modern training methods, to apply information technologies on a large scale and to develop the training system focused on problem solving in the specialization courses.

The content of this book is structured into four core chapters. In Chapter I, the authors describe the possibilities and challenges of the problem-solving training system. In the second chapter the authors offer examples such as how a classic teacher can turn into a modern teacher. The most important thing is to overcome all constraints and barriers to implementing innovations.

Chapters III and IV contain information that contributes to the development of modern education and education through information technologies and on-line platforms. A great attention is paid to the development of technological and techno-pedagogical mechanisms for the successful implementation of problem-solving training programmes.

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[4] Psychology for Psychologists: A Problem Based Approach to Undergraduate Psychology Teaching/ edited by Alexia Papageorgiou, Peter McCrorie, Stelios Georgiades and Maria Perdikogianni, p.3

[5] Psychology for Psychologists: A Problem Based Approach to Undergraduate Psychology Teaching/ edited by Alexia Papageorgiou, Peter McCrorie, Stelios Georgiades and Maria Perdikogianni, p.4

[6] idem, p.7

[7] idem, p.12

[8] idem,p.14

[9] idem,p.17

1.2 POLICIES TO MODIFY STUDENT-CENTERED STUDY PROGRAMMES AND CURRICULA

Under the current conditions, more and more universities focus on student-centered learning and teaching, based on curriculum development taking into account the learning outcomes that students have to achieve at different levels[10].

Learning outcomes should be reflected on 3 levels:

- *At institutional level,* as an affirmation of what university graduates are supposed to be able to do;
- *At programme level,* as an affirmation of what graduates of a study programme should be able to do;
- *At the discipline level,* as an affirmation of what students should be able to know and use at the end of a course [11].

The finality of the learning process for graduates is conceived in two directions: as generic knowledge and skills that must be displayed in all circumstances or as attributes embedded in the field or within a discipline.

The authors recommend the next steps before developing the learning outcomes:

1. we have to decide which knowledge to be involved;
2. selecting topics to be taught;
3. we need to decide on the purpose of teaching the subject and determining the level of performance achieved by students[12].

Once the course outcomes are established, it is necessary to check whether there is a matching and coordination between the graduation, programme and course results. We can do this by representing the curriculum map, which is the systematic review between the expected learning outcomes of the programme and the final graduation results, and the targeted results of the course and the programme[13].

A key role in delivering new educational approaches, namely training programmes or student - centered curricula, lies with the responsibility of the university management. Most importantly, they must set a right balance between upward and downward innovation approaches, develop a proper incentive system, recognize the different needs of the faculties, monitor and find a compromise between the cost-benefit ratio of innovation, to provide support for innovation and to collect relevant data demonstrating the effectiveness of innovation.[14]

John C. Cavanaugh thinks that „in order to implement this change, it is essential that it be sustainable and long-term oriented. The secret of sustainability is relatively simple: a) establishing

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[10] Teaching for Quality Learning at University: What the Student Does, 4th edition/ edited by John Biggs and Catherine Tang, p.9

[11] idem, p.113

[12] idem,p.130

[13] idem,p.127

[14] The power of problem-based learning: a practical "how to" for teaching Undergraduate Courses in Any Discipline", edited by Barbara J.Duch, Susan E. Groh, and Deborah E. Allen, 2001, p.36

a sustainable programme of faculty development, b) maintaining an appropriate combination of incentives, c) creating the need for a new training plan or curriculum, etc.) generating advertising and recognition".[15]

New curricula should be developed on the basis of the following provisions: organization of content around problems, orientation of learning on accumulation of experience and individual perspectives for students, use of students' personal knowledge and experience as a starting point for analysis, development of critical thinking competences, analytical skills and skills for continuous development.[16]

In the book *„Problem-Based Learning case studies, experience and practice"* it is mentioned that among the pioneers of the introduction of the PBL method was the *University McMaster Medical School in Canada* which resorted to the introduction of the PBL study programme in the second half of the '60s. After which a growing number of educational institutions implemented the PBL in their curricula. Relevant are the results of research into the effects of the student-centered PBL study programme *(Albanese and Mitchell, 1993; Schmidt, 1987; Vernon and Blake, 1993).* Among the results obtained, we note the following[17]:

- Students who studied under the PBL study programme had the same performances as students in the traditional curriculum;
- Students who studied under the PBL study programme are superior to the students in the traditional curriculum in the following aspects: the approach to studies; knowledge gained for a long period of time; motivation towards studies; perception of stress during studies;
- The teaching staff of the interviewed faculty appreciate more positively the involvement and role of the students who studied unde the PBL study programme;
- The costs of applying the PBL study programme are comparable to those of the traditional curriculum in a class of about 100 people.

The idea of an effective management within PBL is actively promoted in the first section of the book, which includes 8 case studies related to PBL study programmes.

Thus, at an extreme it is presented the case of „Retreat direction"[18] where maladministration was one of the major factors that condemned the proposal to introduce PBL into the study programme.

At the other extreme it is presented the case of „Overcoming obstacles"[19] illustrating the successful vertical implementation of the PBL method in a medical institution that until then was a fan of the traditional teaching-learning method.

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[15] idem, p.34

[16] The power of problem-based learning: a practical "how to" for teaching Undergraduate Courses in Any Discipline", edited by Barbara J.Duch, Susan E. Groh, and Deborah E. Allen, 2001, p.200

[17] Problem-Based Learning: Case Studies, Experience and Practice/ edited by Peter Schwartz, Stewart Mennin and Graham Webb, p. 3

[18] idem, p. 60

[19] idem, p. 52

Problem-based learning is explained and developed in the book *Psychology for Psychologists: A Problem Based Approach to Undergraduate Psychology Teaching*. The authors provided a summary of teaching theories, namely the origins of problem-based learning [20] (Barrows 1980), how to apply modern theories of teaching in practice[21] (Schmidt 1983) and ways of organizing classes so that students learn skills to solve problematic situations.

It is important to note the competences developed by students through problem-based learning, namely: systematic learning abilities, leadership skills, responsiveness to teamwork, development of explanation, listening and negotiation skills, etc.[22]. (Dolmans, 2005).

The authors have identified various methods of applying problem-based learning and have argued in favor of developing a problem-based curriculum, compared to traditional study programmes[23] (Colliver, 2000).

Various ways of assessing students' knowledge were identified and explained in the chapter „Evaluating students in problem-based study programmes". The authors highlighted the principles of knowledge assessment, process orientation versus outcome orientation, feasibility of evaluation criteria, validation of evaluations, and examples of questions to evaluate students' knowledge[24] (Hays, 2008).

In chapter 4 – „problem-based psychology study programme" - the authors included an example of a study programme, there were identified the subjects studied in each year of study, the professional and personal skills developed in each semester and the possible themes for case studies and group projects[25].

Currently, more and more experts support the idea of training specialists in various fields through modern technologies. The authors of the *Problem-based Learning Online* book illustrate a number of advantages and features of PBL-based training through the figures on pages 63, 68, 83, 95.

The participants in the training process have undergone a great deal of positive change, the roles and rules of communication and the setting of objectives for each category of participant in the learning process have changed. New training programmes (curricula) should focus on three basic principles: learning through simulation and modeling, self-directed learning and learning through practice.

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[20] Psychology for Psychologists: A Problem Based Approach to Undergraduate Psychology Teaching/ edited by Alexia Papageorgiou, Peter McCrorie, Stelios Georgiades and Maria Perdikogianni, p. 19

[21] idem, p. 20

[22] Psychology for Psychologists: A Problem Based Approach to Undergraduate Psychology Teaching/ edited by Alexia Papageorgiou, Peter McCrorie, Stelios Georgiades and Maria Perdikogianni, p.26

[23] idem, p.28

[24] idem, p.35

[25] idem, pp. 87-140

1.3. CHANGES IN STUDENT, TEACHER AND STAKEHOLDER RELATIONSHIPS

The authors of the book „*Teaching for Quality Learning at University: What the Student Does*" claim that the efficiency of teaching in teachers depends on how to think and appreciate what the teaching process is. Three levels of teaching thinking are known. The first two are blame models, in the first case - the student, in the second case - the teacher. The third model integrates teaching and learning, appreciating effective teaching as encouraging students to use learning activities to achieve the proposed outcomes[26].

The first level focuses on differences between students: they are good and weak students. Thus, teachers see their responsibility as knowing the course and its clear exposure. The transmission of information takes place through traditional teaching, so the differences in material assimilation and learning among students are explained by skills, motivation, what school they have graduated, etc.[27]

Teachers at the second level focus on what teachers do. This model is also based on transmission, but the transmission of concepts and understanding, not just information. The learning process is appreciated according to what the teacher does and not the type of student they interact with. This method of teaching is centered on the teacher[28].

The third level focuses on what the student does and how it relates to the teaching process. This model of teaching is student-centered, and the purpose of teaching is to provide support for learning. In order to achieve this goal, it is necessary to establish the following aspects:

- What students need to learn to accomplish the course's outcomes;
- What it means for students to understand the content taught in the way it is stipulated in the desired outcomes;
- What kinds of learning-teaching activities are needed to reach the desired levels of understanding.

So, according to this model, the role of the teacher changes, he/she is no longer the decisive factor and the expert, and this can create psychological barriers for many teachers who are accustomed to the traditional teaching system. [29]

In the case of PBL implementation, the relationship between student and teacher changes: the teacher is seen as a mentor, helping students to adapt as much as possible and „perceive" the problem.[30]

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[26] Teaching for Quality Learning at University: What the Student Does, 4th edition/ edited by John Biggs and Catherine Tang, p. 16

[27] idem, p. 18

[28] Teaching for Quality Learning at University: What the Student Does, 4th edition/ edited by John Biggs and Catherine Tang, p. 19

[29] idem, p. 20

[30] The power of problem-based learning: a practical "how to" for teaching Undergraduate Courses in Any Discipline", edited by Barbara J.Duch, Susan E. Groh, and Deborah E. Allen, 2001, p. 200

Usually, PBL involves students work in groups of 3-7 persons. This interaction is more acceptable because the members of such a group feel more comfortable and this increases the degree of their involvement in the group.[31]

Discussions, debates, analysis of problems in teams, and reaching consensus are the necessary conditions of democracy, which, implementated in society, offer it many opportunities. Thus, PBL allows students to overcome many obstacles and achieve both personal limits and those of society.[32]

Interestingly, PBL can also be implemented in large classes (over 200-250 students), in this case it is necessary to take into account the particularities of teaching in such classes and the possible problems. The experience of the Delaware Institute (USA) shows that the potential problems of using PBL in such lecture halls can be solved by the following measures: 1. Using the help of colleagues, graduates of the same university, who would be able to control the students' team; 2. Establishing behavioral principles characteristic of small groups; 3. Organizing mini-lessons.[33]

Once there is an understanding in the application of PBL, both teachers and students need adequate training and time to accept changes that will interfere with their roles and behavior. The case study „Come and see the real thing"[34] is a relevant example demonstrating that active involvement of teachers in PBL tasks addressed to students can raise questions and raise doubts that can not be successfully overcome until more experience is accumulated.

Also, working with external experts and potential employers can help to understand key issues in PBL, a hypothesis that is supported by the case study „Why does the faculty have teachers if they do not teach?"[35].

At the same time, the book presents at least two examples „Did the students do this?"[36] and „They did not lift their weight"[37], in which the collaboration between students and teachers has resulted in positive results.

Effective communication and collaboration are axiomatic to any human progress. The cases illustrated in this book show how important communication is both between the faculty members who apply PBL and the students working in the same group and of course the teacher and student involved in the PBL process.

Problem-based learning is a learning method in which the student first encounters a problem that is followed by a student-centered learning process (Barrows and Tamblyn, 1980).

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[31] idem, p. 197
[32] idem, p. 197
[33] idem, p. 44
[34] Problem-Based Learning: Case Studies, Experience and Practice/ edited by Peter Schwartz, Stewart Mennin and Graham Webb, p.13
[35] Problem-Based Learning: Case Studies, Experience and Practice/ edited by Peter Schwartz, Stewart Mennin and Graham Webb, p. 98
[36] idem, p. 111
[37] idem, p. 163

The purpose of using problems in this method is rather to stimulate the learning of the information and concepts provided by these problems than to solve the problem [38].

In the paper *„Problem-Based Learning case studies, experience and practice"* it is mentioned that when applying PBL students usually work in small groups supervised by a tutor, which facilitates the discussion and the study process, without being a direct source of information. This brings about a change in both the role of the teacher and the change of the teacher-student relationship.

The problem-based teaching method is also described and explained in the book *Psychology for Psychologists: A Problem Based Approach to Undergraduate Psychology Teaching* based on teamwork. It is proposed that students create groups that will be given problematic situations to solve. These „problems" can be formulated as case studies, clinical examples, in written, graphic, visual form, etc. Then, students will be suggested to apply the seven steps to solve the problem according to the problem-based teaching method [39] (Schmidt, 1983). Documentation, problem research is part of the method - students are encouraged to come up with their own ideas and suggestions to solve the problematic situation, based on the theoretical knowledge previously obtained and during the application of this method.

In the case of the problem-based teaching method, the role of the teacher changes: he/she will no longer be the center of the teaching-learning process, but becomes a facilitator rather than a class teacher in the classical sense of the word. The PBL teaching method is student centered, the teacher being expert, trainer, facilitator and a monitoring tool[40] (Dolmans, 2002).

The authors tend to emphasize the importance of the reverse link in the process of teaching and assessing students' knowledge. Feedback from the teacher must be clear, objective, but also motivational. If the teacher's notes are too short and tough, the student may be discouraged, and the main goal of teaching might fail. The purpose of feedback from the teacher should be to improve and perfect students' skills as future professionals[41].

The role of tutors (course developers or teachers) is very well detailed in the *Problem-based Learning Online* book on pages 90-97. Based on what is said there, it is intended to implement a type of participatory training where the relationship between teacher and student is focused on: mutual information, facilitating access to information, negotiation and training. Figure 6.2 on page 91 illustrates schematically the role of tutors in face-to-face training versus on-line training.

1.4. INNOVATIVE STUDENT-CENTERED PBL AND ACTIVE STUDY

The authors of the book *Teaching for Quality Learning at University: What the Student Does, 4th edition*, John Biggs and Catherine Tang refer to the PBL (problem-based learning) as an

[38] idem, p. 1
[39] Psychology for Psychologists: A Problem Based Approach to Undergraduate Psychology Teaching/ edited by Alexia Papageorgiou, Peter McCrorie, Stelios Georgiades and Maria Perdikogianni, p. 20
[40] Psychology for Psychologists: A Problem Based Approach to Undergraduate Psychology Teaching/ edited by Alexia Papageorgiou, Peter McCrorie, Stelios Georgiades and Maria Perdikogianni, p. 32
[41] idem, p. 170

innovative teaching method, it is mentioned that it is most often used in professional education but can also be used in teaching basic subjects[42].

There are several changes and versions of PBL, but it should focus on five objectives:

1. Structuring knowledge for its use in lucrative contexts. PBL is concerned about the enhancement of knowledge that can be used in practice.
2. Elaboration of justification processes, such processes include problem solving, assumptions, decision-making process.
3. Developing their own learning skills: generic skills in the field, content specific skills, and especially self-management skills.
4. Higher motivation for learning, students are placed in a context that requires their immediate involvement.
5. Developing group work skills.

Albanese and Mitchell (1993) made an analysis of the studies published between 1972 and 1992, reaching the following conclusions:

- Both teachers and students appreciate PBL at a higher level than traditional teaching;
- In PBL, students use more complex strategies to understand the material and work individually;
- PBL students get more in-depth in their learning approaches because they use much more varied sources than regular students who usually rely on course notes or the reference manual[43].

There are two main reasons for resistance to PBL implementation:

1. Teachers need to change their mentality and be open to lifelong learning because they lose their position as an expert.
2. The PBL needs institutional flexibility because it requires multidisciplinary study and an appropriate infrastructure for organizing the group learning process.[44]

The characteristics of a „good" problem, in Barbara J. Duch's opinion, are as follows:

- ✓ An effective problem should attract the student, interest him/her, and motivate him/her for a deeper understanding. It must be as real as possible.
- ✓ The problem that works well encourages students to make decisions based on arguments, facts, information, logic and / or rationalization.
- ✓ The problem must be complex and require the cooperation of all team members to solve it.
- ✓ The first question at the first level of study of the problem should be open, based on existing knowledge and / or be questionable, so that all students can participate in the discussion.

[42] Teaching for Quality Learning at University: What the Student Does, 4th edition/ edited by John Biggs and Catherine Tang, p. 179
[43] Teaching for Quality Learning at University: What the Student Does, 4th edition/ edited by John Biggs and Catherine Tang, p. 182
[44] idem, p.184

- ✓ The objectives of the content of the discipline should be included in this problem and represent conductors between the students' existing knowledge and new concepts.[45]

In addition, a well-conceived problem must always be described (the basic idea, the real conditions of activity, the introduction of the student into the problem data, the description of a detailed plan how the problem will be used in the course, the identification of resources for students).[46]

In the book „*Problem-Based Learning Case Studies, Experience and Practice*" it is stated that in student-centered education, students are the ones who assume responsibility for their own knowledge, this being the basic philosophy of the PBL[47].

In active learning the student usually goes through the following stages [48] *:*

1. the student first encounters a problem without having previously documented on the subject;
2. after that they interact in groups with each other to explore the existing knowledge that is tangent to the problem subject for the study;
3. formulates and tests hypotheses that may matter in solving the problem;
4. identifies future learning objectives to progress in the proposed study;
5. studies individually between group meetings;
6. reintegrates with his / her group to share the acquired knowledge and apply them in the study of the problem;
7. repeats the step 3 to step 6, if necessary;
8. reflects on the process and the content that has been learned.

Another extremely important aspect in the book argues that the evaluation methods used in the PBL must correspond to the way students learn PBL[49] .

Teacher's concerns about appropriate assessment methods are one of the basic difficulties encountered in several case studies, namely:

- „PBL redesign: solving the integration problem", which refers to applying the PBL model from one discipline to another, making students integrate knowledge into a PBL module[50]*;*
- „Professional Teacher Development Workshops: Challenge of PBL", which describes the difficulties encountered in the process of PBL development workshops resulting from the different levels of training and expectations of the participants[51] *;*

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[45] The power of problem-based learning: a practical "how to" for teaching Undergraduate Courses in Any Discipline", edited by Barbara J.Duch, Susan E. Groh, and Deborah E. Allen, 2001, p. 47-50

[46] idem, p. 50-53

[47] Problem-Based Learning: Case Studies, Experience and Practice/ edited by Peter Schwartz, Stewart Mennin and Graham Webb, p. 170

[48] idem, p. 2

[49] Problem-Based Learning: Case Studies, Experience and Practice/ edited by Peter Schwartz, Stewart Mennin and Graham Webb, p. 149

[50] idem, p. 90

[51] idem, p. 104

- „I do not want to be a part of the Group", describing the situation of a student who failed in the evaluation at a PBL unit because of poor group involvement [52];
- „Damage assessment", which characterizes the factors that caused a hostile reaction of the students to the evaluation methods used in PBL [53] .

The modern method of PBL teaching is superior to the traditional one in many ways, but it also faces some difficulties in the implementation process. Process orientation versus result orientation is one of the questions addressed to supporters of this method, says Alexia Papageorgiou, Peter McCrorie, Stelios Georgiades and Maria Perdikogianni, the authors of the book *Psychology for Psychologists: A Problem Based Approach to Undergraduate Psychology Teaching*[54]. It is especially important to set criteria for assessing the tasks offered to students in order to make the teaching-learning process as objective and effective as possible. The authors provide a figure illustrating the knowledge gained by students through the use of the PBL method[55]. Various methods of student assessment are listed through a variety of diverse and different sample tests. Many specialists are inclined to use essays as a reflection and meditation test, but also the method of oral presentation, multiple choice questions, true / false questions, brief case studies, etc. are used as well.[56]. It is widely practiced to present individual tasks and reports, and discussions in groups on concrete situations / case studies [57]. Last but not least, it is recommended that students collect information and tasks solved in a portfolio, including in it their own opinions, teacher feedback and other additional information[58].

Figures 7.1, 7.2, and 11.2 in the book entitled *Problem- based Learning Online* describe the best ways to communicate through comparative analysis - the specifics of communication in face-to-face training and training through information technology. In the PBL environment, collaborative interactions take place through ICT between the teachers and the students enrolled in the course. In a learning environment, assignments and tasks are transmitted and the communication also takes place in this environment, it is explained how to do them, and how are learners' outcomes / projects / solutions received.

In the book *New Aproaches to Problem-Based Learning: Revitalising Your Practice in Higher Education*, the authors Terry Barrett and Sarah Moore pay special attention to the analysis of recent theories in the field that allow you to familiarize yourself with the latest investigations of the PBL elements[59].

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[52] idem, p. 142
[53] idem, p. 156
[54] Psychology for Psychologists: A Problem Based Approach to Undergraduate Psychology Teaching/ edited by Alexia Papageorgiou, Peter McCrorie, Stelios Georgiades and Maria Perdikogianni, p. 36
[55] idem, p. 40
[56] idem, p. 52
[57] idem, p. 54
[58] idem, p. 58
[59] New Aproaches to Problem-Based Learning: Revitalising Your Practice in Higher Education/ edited by Terry Barrett and Sarah Moore, p. 16

Within the first chapter [60], the authors of the book make a review of the evolution of the PBL concept, of defining all the component elements of the integration process of PBL in the upper school.

They try to find answers to the following questions:

- What is the value of PBL?
- What new approaches in PBL do teachers apply?
- How can PBL improve the study process?
- How is it possible to revitalize our PBL practices?

According to the authors of the book, the concept of PBL consists of 6 basic dimensions, which served as starting points to write the book [61]:

a) Developing the problem in PBL

The first part of the book contains a variety of examples of problems that can be used in PBL. Chapter 2 describes several methods that streamline the problem-solving process in PBL, and chapters 3, 4 and 6 illustrate how new technologies can be used for this purpose.

Chapter 3[62] describes the ways in which experts from the real economy and academia are involved in problem-solving in PBL.

b) PBL monitoring in small teams

Typically, teams of 5 to 8 students work under the guidance of a tutor. Chapters 9, 10, 16 propose some recommendations for increasing tutor efficiency and improving teamwork.

c) Evaluations in PBL

Appropriate evaluation methods can improve student learning (Biggs, 2003). Chapter 3 of the paper analyzes examples of how the evaluation process can be facilitated in order to achieve greater outcomes in students' learning.

d) Curriculum development in PBL

Curriculum development in PBL is a multidimensional managerial project (Conway & Little, 2000). Chapter 15 is really useful for the curriculum planning process. The ways to modify the curriculum are discussed in Chapter 17[63].

In the paper, it is emphasized that any activity carried out in this respect is raised by the following questions:

- What knowledge is important for the graduate to possess?
- What are the competencies, skills and key aptitudes for graduates?

[60] idem, p. 3
[61] idem, p. 4
[62] idem,p. 36
[63] New Aproaches to Problem-Based Learning: Revitalising Your Practice in Higher Education/ edited by Terry Barrett and Sarah Moore, p. 229

e) Capacity and knowledge development

Employers are constantly having requirements towards graduates from higher education: ability to communicate, work in teams, manage information, think creatively and critically, solve various problems, etc.

Namely the PBL method allows students to develop these capacities at a great extent. Chapter 5 and 9 analyze how it is possible to help the student connect different concepts.

Chapters 10, 11, 13 illustrate ways to teach the student to manage information, analyze, and generate new ideas.

f) Philosophy of PBL

It tries to determine the roles of all stakeholders involved in PBL: the tutor, the leader, the reader, the observer, etc.

Unlike the classical role of the teacher, in PBL he / she appears in a variety of roles specific to this method. In particular, chapters 6 and 16 describe how it is possible to modify the teacher's behavior in this respect.

The chapters in the book are written by several authors (theoreticians and practitioners), and a great advantage is that they analyze various aspects of PBL from their own experience, accumulated over a long time.

1.5. INFLUENCE OF INFORMATION AND COMMUNICATION TECHNOLOGIES ON PBL, TRAINING, AND CURRICULUM DEVELOPMENT

Educational technologies offer teaching-learning activities that can address a wide variety of learning outcomes. E-learning can be an alternative to traditional classroom teaching and may involve students in specific activities such as, for example, online conferences, knowledge forums. Students can work online and use social networks or skype to organize teamwork, interact with teachers or colleagues, and post serious reflections.[64]

The rapid development of Internet-based technologies allows them to be used in curriculum and study programmes development. Depending on the objectives of the course, the teacher can provide students with a list of websites with useful information, or give them the concrete names of the sources.[65]

In addition, communication between groups or student-student communication in the case of group activity is of great importance. Often, such communications are more effective than classroom discussions in terms of saving time and speed of information exchange. Also, the teacher can communicate more intensely with students through websites, get feedback quickly from them.[66]

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[64] Teaching for Quality Learning at University: What the Student Does, 4th edition/ edited by John Biggs and Catherine Tang, p. 78

[65] The power of problem-based learning: a practical "how to" for teaching Undergraduate Courses in Any Discipline", edited by Barbara J.Duch, Susan E. Groh, and Deborah E. Allen, 2001, p. 73

[66] idem, p. 72

In the book *„Problem-Based Learning case studies, experience and practice”*, the need to develop the teaching and consequently the modification of the curriculum to the application of the PBL method is actively promoted. However, none of the 22 case studies presented in the paper describes a situation where the impact of ICT in PBL student-centered education is estimated. Case studies predominantly focus on the difficulties of implementing PBL from the perspective of teachers or students, without making a connection with the use of information technologies in the cases presented in the book.

The PBL teaching method, considered by the authors of the book *Psychology for Psychologists: A Problem Based Approach to Undergraduate Psychology Teaching*, involves the analysis of large volumes of information independently and the implementation of knowledge gained from the teacher and accumulated on its own. To facilitate the learning process, various techniques and technologies of communication and teaching can be used. The teacher can use the projector to make interesting and interactive presentations. The MOODLE system offers a multitude of opportunities to place specialized information for the students of a particular course, at specific disciplines; assessment of students' knowledge can also be done through MOODLE. Teachers can use Podcast to provide detailed information on the requirements of certain tasks or to provide feedback to students. The online seminars are widely used, thus reaching a common denominator in the case of time divergences. Students can attend classes at home or anywhere in the world.

It is important to capitalize on the technical possibilities offered by the modern society, and the teaching-learning process should always be in step with the new discoveries and should benefit from the novelties and innovations in the world of communication technologies.

Maggi Savin-Baden and Kay Wilkie, the authors of the book *Problem-Based Learning Online* consider that in the 21st century it has become very common to work and learn in the virtual environment. Classical learning and communication methods are gradually being replaced by modern ones. Through ICT, the following training modalities have been developed and implemented:

- ✓ Audio lessons and video lessons;
- ✓ Communication applications: Chat and forum;
- ✓ Task verification method - Drop-Box;
- ✓ Video conferencing;
- ✓ Evaluation methods: peer to peer and self-evaluation.

By means of Figure 12.2, the authors present graphically the categories of methods used in the training process. What is amazing is that „Chat”, „Drop-Box”, and „Forum” methods are more popular than face-to-face training. Thus, learners appreciate the convenience of remote communication.

1.6. CONCLUSIONS

In the process of teaching, we must focus not only on what we should teach, but on what we would like our students to know and how we can help them achieve these outcomes. Teaching materials delivery and assimilation are developed and implemented to align with these outcomes. The book *Teaching for Quality Learning at University, 4th edition, Open University Press* is an aid

to university professors who want to improve their teaching quality and focus more on student-centered learning. It includes both theoretical milestones, studies, and practical recommendations for novices and experts from the academic environment. This work helps you think about how the high quality of teaching can contribute to raising the quality of learning.

Problem-based learning - is a training strategy that helps students acquire special thinking skills and communication skills that are so necessary in the modern world.[67]

Today's students must be developed multilaterally, even more than 10 years ago. The problems the future professionals will face differ in their complexity and therefore require innovative interdisciplinary approaches in the field of training.[68]

Under the influence of PBL, all aspects of modern training change: the emphasis is on self-development of the student with the necessary support of the teacher, the relationship between students, teachers and enterprises involved in the PBL process, the teaching methods are changed, the role of information technology increases in the training process.

Summarizing the content of the book *„Problem-Based Learning case studies, experience and practice"*, we note a number of difficulties in the implementation of PBL that have repeatedly emerged in the case studies presented in this paper.

In particular, these difficulties / barriers in the application of PBL referred to the following aspects [69]:

- the reticence of teaching staff and students towards the changes imposed by the transition from a traditional study programme to the one that includes PBL elements;
- the fear of losing control and fear of the unknown;
- the lack of knowledge tangential to PBL principles and practices both from teachers and students;
- the tendency to demonstrate that PBL works at least as well as traditional teaching-learning methods.

However, from the case studies presented in the book it can be seen that in most cases all these difficulties / barriers have been overcome through effective management and by learning from one's own mistakes and the mistakes of others, acquiring new knowledge from the experience gained.

The case studies presented in the book illustrate several attempts and errors made in the application of PBL. At the same time, the book also illustrates the changes that need to be made to promote adaptation to new learning-teaching methods. Of course, there are also mentioned situations of successful implementation of the PBL method in the study programme.

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[67] The power of problem-based learning: a practical "how to" for teaching Undergraduate Courses in Any Discipline", edited by Barbara J.Duch, Susan E. Groh, and Deborah E. Allen, 2001, p. 3

[68] idem, p. 4

[69] Problem-Based Learning: Case Studies, Experience and Practice/ edited by Peter Schwartz, Stewart Mennin and Graham Webb, p. 171

The usefulness of the book results from the fact that its users will be able to apply the knowledge gained from this reading when faced with a similar situation in their own implementation of the PBL method[70].

The book "*Psychology for Psychologists: A Problem Based Approach to Undergraduate Psychology Teaching*" made an attempt to introduce a problem-based curriculum in teaching psychology. In chapters 3 and 4, the authors described the basic principles of problem-based study programmes. Chapter 4 gives readers an example of a 3-year study programme for students studying psychology, and in Chapter 5 are given concrete examples of case studies and problematic PBL situations. The book also provides information about the infrastructure needed to implement, evaluate and manage such a problem-based course.

Trends in education raise a growing emphasis on new teaching, learning and participatory learning methods. In this context, the book *Problem-based Learning Online* provides useful and current information on trends in the country's education system. The information presented in this book is very well systematized and treats, quite complexly, the problem of transition from face-to-face training to distance learning through ICT and PBL.

The book "*New Aproaches to Problem-Based Learning: Revitalising Your Practice in Higher Education*" is a complex collection of ideas, approaches, examples, behavioral patterns related to the use of PBL in higher education. It will facilitate finding many answers to questions that will surely appear in the process of applying the PBL method in local universities.

This book will allow teaching staff to explore new ways to involve students in the PBL method, avoiding some potential difficulties from the very beginning and being aware of certain risks.

[70] Problem-Based Learning: Case Studies, Experience and Practice/ edited by Peter Schwartz, Stewart Mennin and Graham Webb, p. 7

2 METHODOLOGY

2.1 METHODOLOGICAL FRAMEWORK

The purpose of this report is to conduct an analysis of the existing situation in the field of student-centered learning in the universities of the Republic of Moldova based on the Academy of Economic Studies of Moldova. Thus, we will lead by the standard methodology developed under the project and that has served as the basis for benchmarking of problem-based learning in the partner countries of the European Union: Denmark and the UK, presented in the Report of the Working Package 2. This methodology aims at exploring the relationship between the university's internal structures and study programmes, including how the study programme is developed and supported throughout the university. The cohesion of the elaboration of the study programme with its support will be examined at different levels of the institution: the system level, the university management level, the faculty level, as well as the study programme level. Also, issues related to the integration of disadvantaged student groups as well as the available physical environment will be studied.

The use of the standard methodology for drawing up this report was necessary in order to make a reference understanding of how student-centered teaching and learning at EU partner universities is embedded in and related to general institutional structures, and then to explore the same relationship, fit-for-purpose at our own universities.

The standard methodology implies the highlighting of 6 levels: System Level, University Management Level, Faculty Level; Level of the Council of Studies; Disadvantaged groups; Physical environment. Normally, some overlay between levels is possible. In other cases, the information was only presented in a compartment in order to avoid repetitions. It is important that when addressing a problem, we consider its relationship with other levels and the impact that it may have on the domains within them and at the transversal level.

The questions that form the methodology in question have served as a landmark for collecting data for the preparation of this Report and then for their analysis. We have also led ourselves by the criteria outlined in WP2, which has facilitated cross-analysis for the Business and Administration study programme at AESM and similar programmes at Aalborg University, Denmark. and Gloucester University in the UK in the context of implementation of problem-based learning.

Studying the experience of universities mentioned regarding the use of student-centered learning methods, in general, and problem-based learning, in particular, but also of the entire education system, led us to elaborate several variants of educational plans for the „Business and Administration" specialty, which would allow the implementation of this method.

When developing the pilot study programme, we took into account the use of PBL method in the various universities we had visited and whose experience we had studied. Each university has its own peculiarities that are specific to the country. It is from this goal that we have started.

A variant was developed, which we called „revolutionary", very close to the one existing at Aalborg University, but which is very unlikely to be implemented in universities in the Republic of Moldova, at least for the next 10-15 years . This is due to the following moments:

1. In their work, Universities base on the compliance with certain legislative documents, which are mentioned in the Report. The educational plans, but also the organization of the entire education system, are based on the compliance with certain regulatory requirements. Exit from these rules or their non-compliance will result in non-accreditation of the programme by the National Agency for Quality Assurance in Professional Education (ANACIP), which has developed indicators according to the normative acts in force.
2. The higher education system in Denmark is provided free of charge. The state pays for the student. This makes the student responsible for the tasks he / she has to do. In the Republic of Moldova, the state offers very few scholarships for studies, especially in the field of economics, to those who wish to study in these specialties. The student pays for studies, and in this respect advances some regulatory requirements, such as a higher number of hours of direct contact with the teacher, more „attention" from universities.
3. A major importance in the successful achievement of an idea lies with the mentality of those who are about to accomplish it, as well as taking into account certain traditions and customs existing in the region. We refer here to the tradition in education in general, including the higher one, which implies the existence of a schedule for attending classes, 5 days a week, in the auditors, with a mentor.

All this allowed us to elaborate the less revolutionary plan, but which can actually be implemented, presented in the Report, Chapter VI. Obviously, in order to meet the challenges posed by problem-based learning, it is necessary to introduce this learning strategy into as many courses as possible, and this can not happen overnight. That is why we have developed an Action Plan (Roadmap) to implement the Pilot Programme.

The distant goal we draw is that PBL will turn from a learning strategy into the AESM philosophy.

2.2 DATA COLLECTION

In order to elaborate this Report, following the methodology presented, the legislative and normative acts that underlie the activity of the higher education institution in Moldova in general, and AESM, in particular, in the field that interests us were analyzed. Also, the didactic and managerial experience of the project members, who participated in the data collection and the elaboration of the Report, was also of great use. The information was collected according to the following template:

Table 2. Data reporting template

Question / Problem	Source consulted	Findings	Reflections
L1: System level			
L2: University management level			
L3: Faculty / department level			
L4: Study Council level			
L5: Integration of disadvantaged students			
L6: Infrastructure (physical environment)			
L7: Study programme level			
L8: Pedagogical training level			

2.3 DATA ANALYSIS

In order to analyze the data, the working team used the proposed methodology, seeking answers to the submitted questions and considering the way of action in the autochthonous universities, the impact of different phenomena on the activity of the institution.

Cross-case analysis, as shown in Table 3 (Cross-case analysis) or Comparative template (Table 4), allowed the criteria, properties and indicators to be reformulated for each level, but based on those criteria that were submitted to drafting the Report in WP2. Highlighting and taking into account these criteria allowed us to perform the cross-case analysis, to highlight some common elements, but, to a large extent, also the existing differences. This analysis served as a basis for the development of the pilot study programme.

Table 3. Cross-case analysis template

Criteria, properties, indicators	AESM	AAU	UoG
L1 criterion etc.	Main elements by domains	Main elements by domains	Main elements by domains

The table below summarizes more important criteria for the study carried out, common patterns that emerged during the analysis, as well as the variations that occurred.

Table 4. Data reduction model

	Common patterns	Peculiarities
L1: System level Criterion 1 Criterion 2 Criterion 3		

3 BACHELOR'S DEGREE STUDY PROGRAMME IN BUSINESS AND ADMINISTRATION AT THE ACADEMY OF ECONOMIC STUDIES OF MOLDOVA

3.1 INTRODUCTION

The Academy of Economic Studies of Moldova (AESM) was founded on 25 September 1991, based on the faculties of Economics and Economics in Commerce of the State University of Moldova and the National Economy Institute of Moldova of the Ministry of National Economy of the Republic of Moldova.

AESM's mission is to generate and transfer knowledge through:

a) supporting the development and affirmation of students and researchers in economic and administrative sciences, as well as in other sub-domains of social sciences and humanities;
b) advanced scientific research in relation to social requirements through high-quality study programmes at all cycles and in all forms of graduate and post-graduate training;
c) the generation of advanced knowledge;
d) adult education and training[71].

At present, the Academy of Economic Studies of Moldova is a university complex consisting of 6 faculties with 26 chairs, 2 departments, 7 centers, 13 services, the Master's degree Excellence School in Economics and Business, the Doctoral School, the Higher School of Tourism and Hotel Services, a business incubator; National College of Commerce.

AESM's educational offer includes 22 study programmes in the first cycle, Bachelor's degree studies, and 50 study programmes in the second cycle, Master's degree studies. Currently, 9102 students are enrolled at AESM in the first cycle, Bachelor's degree studies, including 5175 full-time students and 3927 part-time students, and 1963 students in the second cycle, Master's degree studies. Within the university, there is the AESM's Doctoral School and the Doctoral School in Law, Political and Administrative Sciences, where 150 people continue their studies in the third cycle, Doctorate.

Assuming its vocation and values laying at its foundation and respecting the institutional tradition developed over the decades by the personalities that have represented it in the country and abroad, the Academy of Economic Studies of Moldova aims to be a reference university for Central Europe.

3.2 SYSTEM LEVEL

In order to ensure the minimum quality standards of the educational process, the accreditation of the study programme and / or of the educational institution is a mandatory external evaluation

[71] Charter of the Public Institution Academy of Economic Studies of Moldova, DS no. 7 May 29, 2015 http://ase.md/files/documente/regulamente/interne/1.1_carta_asem2015.pdf

procedure in the Republic of Moldova. Thus, the university obtains the right to carry out the educational process, to organize the admission to studies and the examinations for completing the studies, as well as the right to issue diplomas, certificates and other study documents recognized by the Ministry of Education[72] only if it has been accredited or has authorization for provisional operation.

In order to ensure an integrated, credible, objective and transparent system of external evaluation and accreditation of institutions and study programmes in technical, higher education and continuous training, in 2015 the National Agency for Quality Assurance in Professional Education (ANACIP) was established in the Republic of Moldova.

ANACIP is an autonomous institution, independent in decision-making and organization, financed from the state budget and from its own revenues, ANACIP has the following rights:

- to involve external evaluators in its field of activity;
- to draw up, on the basis of a transparent methodology and using competence and competitiveness criteria, its own register of expert evaluators, which it trains methodologically and delegates them to conduct external quality evaluation missions;
- to delegate expert evaluators to external quality evaluation missions;
- to verify, at the end of the evaluation mission, that the expert evaluators comply with the methodology applied;
- to have in favor of its employees the right to unhindered access to the educational institution under evaluation during the course of the evaluation;
- to inform the evaluated institution and the Ministry of Education about the results of the external evaluation;
- to work under self-management conditions and to determine the amount of remuneration for employees and service providers according to the legislation in force;
- to propose to the Government, based on the decision of the Governong Board, the amount of fees for the services rendered;
- other rights provided by the legislation in force.

In accordance with the national legislation and the European framework for quality assurance in education, ANACIP developed the methodology of external quality evaluation for provisional authorization and accreditation and set accreditation standards, criteria and performance indicators for the external evaluation of the study programmes and educational institutions. According to this, accreditation can be done by ANACIP or another external quality assurance agency registered in the European Quality Assurance Register for Higher Education (EQAR).[73]

Quality evaluation in higher education aims at:

- institutional capacity;

[72] Government Decision no. 616 of 18.05.2016 for the approval of the Methodology of external quality evaluation for provisional authorization and accreditation of study programmes and vocational education and training, higher education and continuous training institutions, I. General provisions, p. 2.

[73] Government Decision no. 616 of 18.05.2016 for the approval of the Methodology of external quality evaluation for provisional authorization and accreditation of study programmes and vocational education and training, higher education and continuous training institutions

- educational efficiency, including academic achievements;
- quality of professional and continuous training programmes;
- institutional quality management;
- the results of scientific research and / or artistic creation;
- the consistency between the internal evaluation and the real situation.

Study programmes and educational institutions are subject to external quality evaluation every 5 years or upon the expiry of the provisional authorization period, after the first promotion of graduates.

In the case of the first external evaluation, the reference period shall be calculated from the date of provisional authorization to the required evaluation date, but not more than five years.

The external quality evaluation procedure for authorizing the provisional functioning of study programmes and educational institutions shall be completed by the Agency within 6 months from the date of registration of the request for external evaluation.

Accreditation is requested and granted, for each educational institution and for each study programme in Cycle I, Cycle II and Cycle III. The initiation of a master's degree programme is possible if the bachelor's degree programmes in the same field of professional training are accredited, the programme has obtained the provisional authorization or another master's degree programme in the same general field of study is accredited.

The accreditation of a study programme and of an educational institution is granted by a Government decision, at the proposal of the Ministry of Education and based on the decision of the Governing Board of ANACIP. Once accredited, study programmes and educational institutions are subject to an external quality evaluation for re-accreditation at least every 5 years.

According to the Education Code of the Republic of Moldova the following will depend on the results of the external evaluation of the higher education institutions:

- the ranking of universities by category within the accreditation procedure;
- provisional authorization, regular accreditation and re-accreditation of higher education institutions, as well as ranking of study programmes;
- the ranking of higher education institutions shall be based on the methodology approved by ANACIP;
- depending on the category of the higher education institution and the ranking of the study programmes, the number of places financed by the state budget awarded to the higher education institution shall be determined; budgetary funds allocated to the higher education institution for research, development, innovation and artistic creation activities;
- other norms under the law.[74]

The external quality evaluation procedure for provisional authorization or accreditation of the study programme and / or the educational institution has the following stages:

1) the initiation of the evaluation procedure by the educational institution

[74] The Education Code of the Republic of Moldova, no. 152 of July 17, 2014, art. 83

2) internal evaluation of the quality (self-evaluation) and elaboration of the self-evaluation report:
3) external quality evaluation:
   - submission of the application and of the dossier in paper and electronic format;
   - approving the decision to initiate or reject the external evaluation procedure, within 45 working days of the date of registration of the application, by the Governing Board of the Agency;
   - the establishment of the external evaluation commission;
   - analysis of the self-evaluation report;
   - conducting the evaluation visit to the educational institution / institutions and filling in the „Visit sheet";
   - elaboration of the external evaluation report;
   - presenting the results of the evaluation and taking the decision by the Governing Board of the Agency;
4) transmission of the decision of the Governing Board of the Agency to the Ministry of Education;
5) granting provisional authorization / accreditation by the Government in the case of vocational education and training and higher education and by the Ministry of Education for continuing adult education;
6) application of recommendations resulting from external evaluation

The external evaluation committee is made up of at least 3 members, selected from the Agency's Registry of Expert Evaluators, and includes academics, specialists in the evaluated area, student representatives and employers' representatives who carry out their professional work in the area under evaluation.

Accreditation may also be granted conditionally if there are shortcomings, which may most likely be remedied within six months. In this case, the accreditation period may be reduced.

3.3 UNIVERSITY MANAGEMENT LEVEL

The governing bodies of the universities, their structure and their number are determined by the Education Code of the Republic of Moldova. The law provides that the System of Governing Bodies of Higher Education Institutions consists of the Senate, the Institutional Strategic and Development Council, the Scientific Council, the faculty council, the council of administration and the rector of the institution[75].

The supreme governing body of the higher education institution is the Senate consisting of scientific, didactic and non-didactic staff, elected by the secret vote of the teaching staff of the faculties, departments, scientific centers, of students elected by academic formations and student associations, from representatives of the trade union bodies, according to the institutional regulation elaborated on the basis of a framework regulation approved by the Ministry of Education. The Rector, Vice-Rectors, and Deans are ex-officio members of the senate. The mandate of the Senate

[75] The Education Code of the Republic of Moldova, no. 152 of July 17, 2014, art. 102

is 5 years, synchronized with the rector's term of office. The duration of the mandate of Senate members from among the students is one year, with the possibility of renewing the mandate. The Senate is chaired by the Rector of the institution.

Another governing body is the Council for Institutional Strategic Development with attributions determined by the Code of Education. It consists of 9 members: 4 internal and 5 external. The members of the Council for Institutional Strategic Development are appointed for a 5-year term. The operative management of the higher education institution is provided by the rector, assisted by the vice-rectors, with the support of the council of administration.

The Scientific Council is established within Universities, which intend to organize doctoral degree programmes and is made up of a minimum of 7 people and a maximum of 15 people [76].

The Faculty Council is the decision-making and deliberative body that assures the management, guidance and control of the educational and scientific research activity of the faculty and is elected for a term of 5 years.

The Council of Administration ensures the operative management and applies Senate decisions [77].

The organizational structure includes: faculties, chairs, institutes, masters schools, doctoral schools, scientific research centers and laboratories, councils, committees, specialized centers, consultative structures, service providing units, IT center, personnel improvement units, library, publishing house, typography, garage, recreation facilities. AESM includes functional structures organized as specialized departments or services in the economic, legal and secretarial fields, human resources, accounting, administrative, etc.

Institutional management is carried out by the management and administrative structures of AESM.

The quality of studies and the training of graduates for future employment is a priority objective for AESM. In this respect, the use of student-centered teaching methods is encouraged. In the AESM Charter, Chapter VII „Promoting student-centered education" is dedicated to this topic.

In the AESM's STRATEGIC DEVELOPMENT PLAN for the period 2012-2017 there is mentioned: „Promoting flexible and innovative teaching methods, an effective means of ensuring this by capitalizing on the opportunities offered by information and communication technologies, including to support personalized and interactive learning, distance learning, virtual mobility, etc., and the strengthening of the knowledge transfer infrastructure is necessary for this purpose"[78]. The MOODLE platform is used in the training process. Emphasis is placed on capitalizing on opportunities for partnerships with the social and business environment, including designing and developing new courses and new study programmes, and facilitating further employment for our

[76] Framework Regulation on the Organization and Functioning of the Governing Bodies of the Higher Education Institutions of the Republic of Moldova, approved by Order No 10 of the Minister of Education of January 14, 2015, art.32

[77] Charter of the Public Institution Academy of Economic Studies of Moldova, DS no. 7 May 29, 2015, art.55, available at http://ase.md/files/documente/regulamente/interne/1.1_carta_asem2015.pdf

[78] Strategic Development Plan of the Academy of Economic Studies of Moldova for the period 2012-2017, pp. 8-9, available at http://ase.md/files/documente/regulamente/interne/1.2_plan_strategic.pdf

graduates. The implementation of tools for monitoring the insertion in the labor market of the AESM graduates, their socio-professional path and the provision of services to facilitate employment are also under the continuous monitoring of AESM's management. These tools also seek to be used to assess the extent to which the knowledge, skills and abilities gained are sufficient to enable graduates to get employed on the labor market, develop their own businesses, continue their studies in the next cycle, and learn, thus facilitating the process of matching the educational offer with the requirements of the labor market, defined at national and international level[79]. The Career Guidance Center has been established at AESM for this purpose.

For the purpose of better knowledge of foreign languages, the AESM extended the teaching of the foreign language for an academic year, increasing the number of hours of direct contact with the teacher. The emphasis is not on the actual knowledge of the foreign language, but on the knowledge of the foreign business language. There are some specialties in cycle I, bachelor's degree studies, (World Economy and International Economic Relations, Finance and Banking, Tourism) where teaching and learning is done in foreign languages. At the second cycle, Master's degree studies – there is the study programme Financial-Banking Administration. The academic mobility of both students and teachers is encouraged.

The Department of Studies, Curricular Development and Quality Management (DSDCMC) is responsible for student-centered teaching and learning at the university. In each academic year, during the winter vacation, teachers are offered the opportunity to learn about new teaching methods, centered on the student. The Department has the role of developing policies in the field of teaching - learning - evaluation, elaboration of internal regulations that are relevant to this field. The DSDCMC works in close contact with departments, guiding their work in curriculum development and improvement, development and improvement of educational plans.

In order to coordinate the quality assurance in AESM at the level of the Senate, the Quality Council is established, which has an advisory role in substantiating the decisions regarding AESM's quality policy and objectives. The Council is composed of seven members and is coordinated by the Rector of AESM, as chairman. The members of the Quality Council are valuable personalities who have been noted for professional performance. The Quality Council also includes students with very good learning outcomes[80].

The responsibility for implementing policy and quality objectives in AESM lies with the Department of Studies, Curriculum Development and Quality Management, which has the following responsibilities in the field of quality management:

a) elaborating procedures and internal regulations related to each process / subprocess, setting process control parameters and requirements for recording and monitoring of these parameters (control and registration forms) and, finally, the elaboration of the Quality Management System Manual.
b) elaborating and submitting proposals for improving the quality management system documentation (quality manual, internal procedures and instructions, process diagrams, control forms and records) developed according to the requirements of ISO standards.

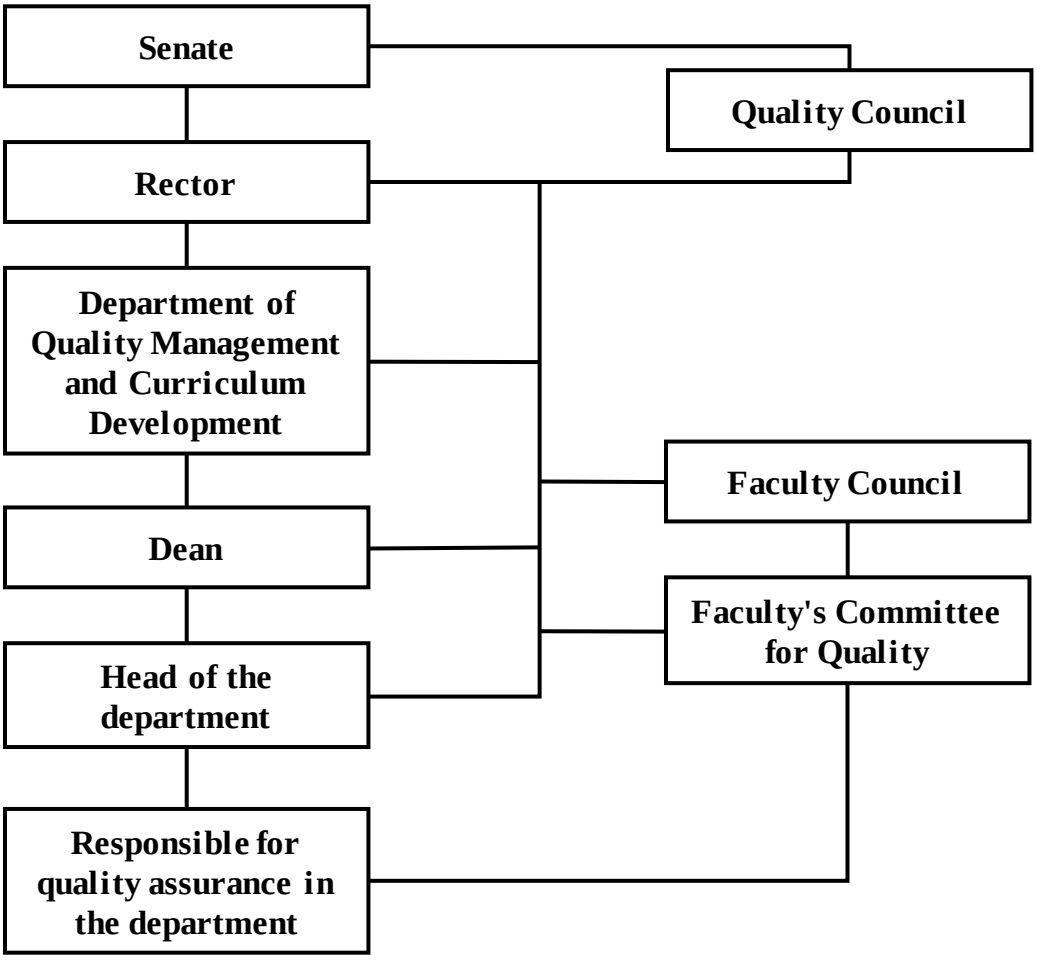
[79] Strategic Development Plan of the Academy of Economic Studies of Moldova for the period 2012-2017, p. 8
[80] The concept of quality assurance system of studies in AESM, p. 8, available at http://ase.md/files/documente/regulamente/interne/1.3_conceptul_calitatii.pdf

c) developing five year strategic plans and annual operational plans on quality improvement measures;
d) consistently applying the quality assurance methodology in education;
e) co-ordinating and logistically supporting the activities of the Quality Committees of the Faculties;
f) involving all members of the academic community in quality assurance activities;
g) drawing up annually, at the end of each academic year, a report on the state of the quality of the training, education, and research process on the basis of which the internal evaluation report is developed;
h) developing its own database and information on the quality of the educational services provided;
i) actively cooperating with institutions that have regulated competencies in quality assurance in education in the country and with agencies or other similar institutions from abroad.
j) drawing up annually, at the end of each academic year, an audit report on the compliance of the quality management system with the requirements of the standard ISO 9001: 2000.

In each faculty, the faculty council appoints a Committee of the Faculty for Quality Assurance, headed by the Dean. The committee consists of highly qualified teachers (one member from each subdivision is compulsory) and students with outstanding results.

The work of the Committees is assisted logistically by the DSDCMC.

Figure 1. Structure of the Quality System in AESM



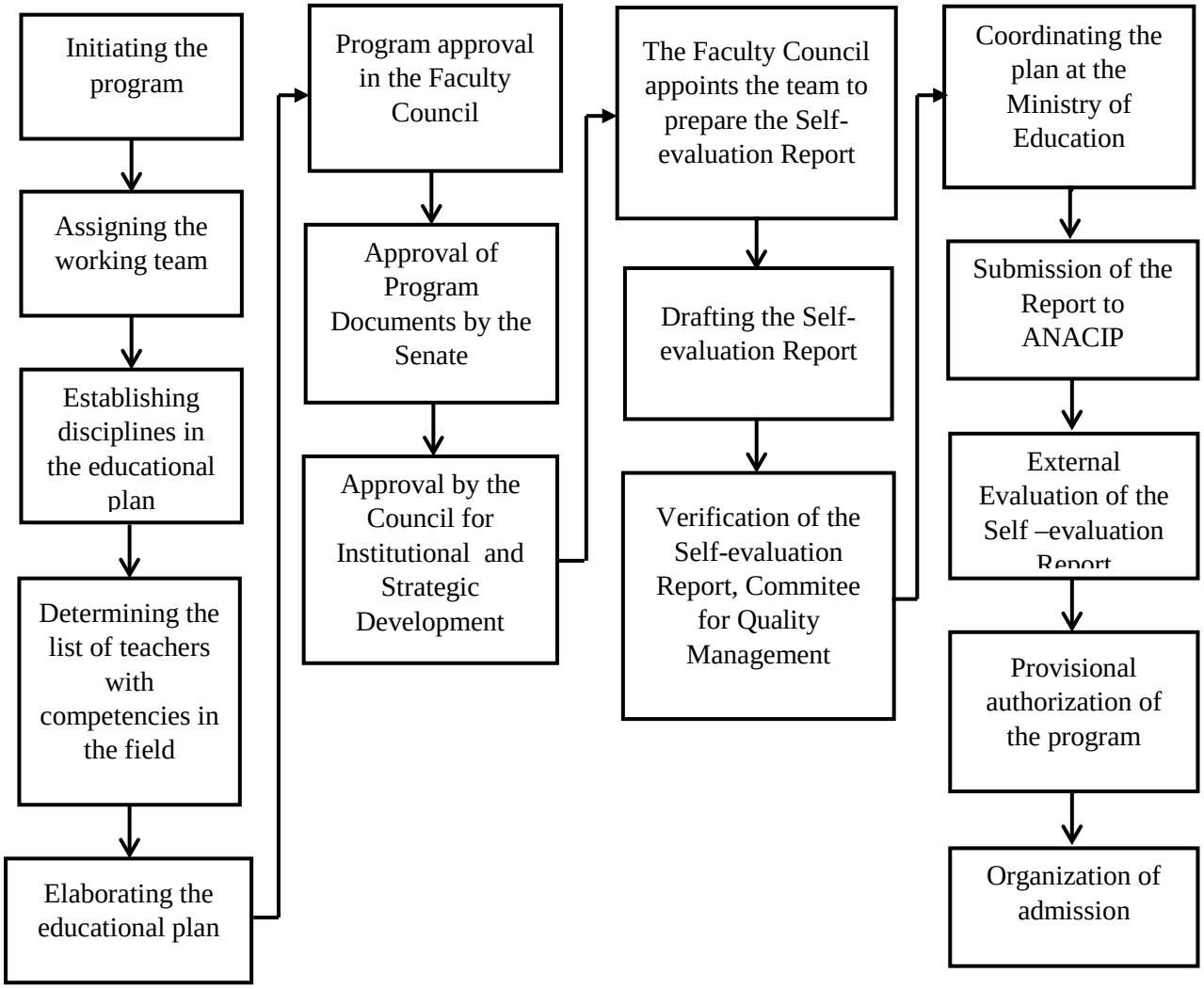
The process of developing the edycational plan is carried out by the specialty chair / department, responsible for training the students in a certain field. The initiative to modify the plan can come both from faculty / chair / department and from the top management of the university or from the implementation of some modifications in the regulatory normative acts elaborated by the Ministry of Education. It is mandatory to take into account the provisions of the Framework Plan for higher education (cycle I – Bachelor's degree studies, cycle II – Master's degree studies, integrated studies, cycle III – Doctoral degree studies), implemented by Order of the Ministry of Education of the Republic of Moldova no. 1045 of October 29, 2015[81]. Although at AESM level we try to involve the business environment in the development or improvement of the educational plans as well, there is no strict regulatory provision in this respect. Professional associations, at least for economic specialties, even where they exist, are not necessarily involved in the development or approval of educational plans.

The educational plan is elaborated on the basis of the National Qualifications Framework [82], which includes the objectives of the study process, expressed through learning outcomes, the standard period of study, the workload requested, the requirements for starting the studies, the list

[81] http://edu.gov.md/sites/default/files/ordinul_nr._1045_din_29.10.2015_plan-cadru_pentru_studii_superioare_ciclul_i_-_licenta_ciclul_ii_-_master_studii_integrate_ciclul_iii_-_doctorat.pdf
[82] http://edu.gov.md/sites/default/files/cnc_36_812-stiinte_economice.pdf

of course units / modules studied, curriculum (syllabi) of the course units / modules, course units descriptions, proposed options and the conditions for selecting course units / modules, the possibilities of choosing the educational paths, the requirements for completing the studies, the study documents, the qualifications / titles to be awarded at the end of the studies.

Figure 2. Process of elaboration and approval of the Study Programme



12 months before studies begin	6 months before studies begin

The requirements for developing the Curriculum of the course unit / module are established by the Regulation for the organization of studies in higher education based on the National System of Study Credit, approved by the Ministry of Education. In line with the development of the socio-economic sector, higher education institutions will review / update their educational plans once every 5 years. Modification of the educational plan is carried out at the chairs providing the respective study programme and is approved by the Faculty Council. The review / update of the educational plans is validated by the University Senate and is submitted to the Ministry of Education every 5 years for coordination.

Within AESM, studies in the first cycle, bachelor's degree, are conducted within the six faculties. Master's degree Excellence School in Economics and Business is in charge for the organization of studies in the second cycle. Studies in the third cycle are organized in Doctoral Schools.

The AESM Doctoral School has been established at AESM to conduct doctoral studies in economic research and also the Doctoral School in Law, Political and Administrative Sciences, established by a National Consortium Agreement between the Academy of Economic Studies of Moldova and the University of European Political and Economic Studies „Constantin Stere". The Doctoral School offers the opportunity to study and obtain a higher university degree, completed by issuing a doctorate diploma and in the case of successfully defending the doctoral thesis by granting the title of doctor in the legal, political and administrative sciences. Elaboration of the educational plans is carried out by the management of the Doctoral School in collaboration with the heads of chairs / departments.

All internal regulations and other normative acts related to the educational process and curriculum development are available on the AESM's webpage http://ase.md/regulamente/reglementari-asem.html the educational plans and curricula by disciplines can be viewed either on the website of the responsible department or on the MOODLE platform.

For each academic discipline the course holder develops the curriculum - the programme of the respective course containing information on: the name of the course holder, the number of study credits allocated, the total number of hours envisaged, including work in the classroom (devided: lectures and seminars or practical works, laboratory works) and the number of hours for individual work, the year, the semester when the course is offered, its code, the language of instruction, the form of assessment, the specialty in which the course is delivered, the faculty within which the specialty is given, the formative category of the course (*F - fundamental, G - general, S - specialty, U - socio-humanistic, M - orientation to other field*), the optional category of the course (*O - obligatory, A – optional, L - at free choice*), the maximum number of students who can enroll in the course, mandatory and recommended access conditions. It also contains information regarding the substantiation of the need to teach this course, there are mentioned the learning outcomes, the structure and content of the course (the title of the theme and main questions for each theme), the bibliography to be consulted, the teaching technologies used by the teacher, the final assessment method, the final grade structure, the total time (hours per semester) of the individual study activities requested from the student. The teacher is responsible for the achievement of curriculum. Monitoring is done by the head of the chair/department or the dean of the faculty.

The minimum qualification requirements for holding teaching positions (university assistant) and scientific-didactic (university lecturer, associate professor, university professor) are set in the Education Code. Thus, in order to hold a scientific-didactic position in higher education, it is necessary to have a qualification of the level 8 ISCED - doctoral studies. In order to hold the teaching positions, the graduates of non-pedagogical higher education study programmes have to attend the compulsory psycho-pedagogical module corresponding to 60 transferable study credits. To obtain these study credits, the teacher can enroll in various courses, which are organized in the University. Thus, AESM offers new teachers coming to university the opportunity to acquire the necessary

knowledge in the psycho-pedagogical field and to accumulate the necessary number ofstudy credits. For AESM employees, these courses are free of charge. Students enrolled in the second cycle, master's degree studies, or teachers from other educational institutions can also enroll in the courses. The DSDCMC is responsible for organizing the psycho-pedagogical module. At the same time, the Department of Human Resources is involved in the continuous development and training of staff. Within this Department, the employees' records, the training courses they have attended, are kept. At least once every five years, all teachers are required to undergo a pedagogical training course (apart from the 60 study credits mentioned) and an internship in enterprises in the real sector of the national economy. Evidence is kept by the employees of the Department of Human Resources and is taken into account when people take part in the copetition for didactic-scientific positions.

For the academic year 2016-2017, in order to develop the teachers' skill, the following courses of pedagogical improvement were proposed:

- ✓ ***„Problem Based Learning – PBL",*** 20 hours. There were 31 people registered.
- ✓ *„**Innovative methods of teaching - learning - evaluation in professional education"***, 20 hours. 38 people registered
- ✓ ***„Psychology. Personal development of the teaching staff"***, 20 hours. 26 people were enrolled;
- ✓ ***„Application of information technologies in communication. Moodle System"***, 20 hours. 20 people were enrolled;
- ✓ ***„Deontology and Effectiveness of Didactic Communication"***, 20 hours. There were 33 people registered.

Students are represented in most of the AESM's governing bodies. Thus, in the AESM's Senate students from all three study cycles represent ¼ of the total number of members, stipulation provided for by the Framework Regulation on the organization and functioning of the governing bodies of the higher education institutions of the Republic of Moldova.[83] According to the same Regulation, in the Faculty Council students are represented in the proportion of 25% of the total number of members. The Administration Council includes 1 student representative, member of the AESM's Senate. Also, students participate in the governing of the university through the student self-government bodies, such as the Student Senate[84], the Student Council of the Faculty [85].

Key performance indicators at the university level are usually determined in the academic accreditation process and refer to different components of the educational process.[86]

[83] http://edu.gov.md/sites/default/files/conducere.pdf

[84] http://ase.md/files/documente/regulamente/interne/4.3_senat_stud.pdf

[85] http://ase.md/files/documente/regulamente/interne/4.4_consil_stud.pdf

[86] http://anacip.md/index.php/ro/legislatie/anacip/ghiduri/send/22-ghiduri/412-ghid-de-evaluare-externa-a-programelor-de-studii-de-licenta-invatamantul-superior

3.4 FACULTY / DEPARTMENT LEVEL

The Faculty of Business and Business Administration (FBBA) is a structural subdivision of the AESM responsible for organizing and conducting the instructive-educational process, conducting methodical, educational and scientific research activities for 7 specialties: Business and Administration, Acquisitions, Intellectual Property Management, Marketing and Logistics, Tourism, Merceology and Commerce, Management and Technology of Public Catering.

The Faculty benefits from academic freedom in the teaching and scientific fields. Within the faculty there are established 5 chairs that organize and perform didactic and scientific activity at one or more related disciplines.

According to the AESM Statute, the governing body of the faculty is the Faculty Council. The members of the Council are: ex officio members (dean, vice-dean and heads of chairs / departments within the faculty), teaching staff and students, representing 1/4 of the total number of members of the Council. The term of office of the members of the Council shall be five years, except for students whose term of office is one year, with the possibility of renewal. The faculty council is chaired by the dean.

The Dean is elected by the Senate at the proposal of the faculty Council and represents the faculty in the relations with the other structures of the AESM, coordinates the activity of the Office of the Council and is responsible for the quality of the whole process of education, research and culture at the faculty.

The faculty Council is responsible for examining and presenting the Senate for approving / endorsement new study programmes (educational plans) and approving curricula (analytical programmes / syllabi) for course units included in the programme.

After the approval of the study programme, the faculty management appoints the team to prepare the self-evaluation report of the new study programme for provisional authorization.

The Quality Assurance Committee is established for the quality assurance coordination within the faculty. Its members are the representatives of all faculties and students with good results in education. The Quality Assurance Committee of the faculty is headed by the Dean and is responsible for developing annual plans on how to improve the quality, implementation of quality assurance plans approved by the Faculty Council, assessing the quality of each academic staff etc.[87] Also, there is a person especially appointed who is responsible for the implementation and monitoring of quality assurance processes at each faculty.

Within the Faculty Council, there is an advisory body on didactic and methodological-scientific activities established - the Methodical Committee of the faculty [88]. The Methodical

[87] Conceptul sistemului de asigurare a calității studiilor în ASEM, DS nr. 4, din 31 octombrie 2007, art. 5.3

[88] Regulament de funcţionare a consiliului metodico-ştiinţific al ASEM şi a comisiei metodice a facultăţii, DS nr.4 din 27 octombrie 2010

Committee consists of representatives of the chairs / departments with prestigious results in research and didactic activity, proposed by the chairs / departments and validated by the Faculty Council.

The Committee proposes the Faculty Council methodological and didactic works (methodological guidelines, programmes, curricula, collections) for approval for their publication, and the monographs and textbooks are recommended for publication and promoted for further expertise in AESM's Methodological and Scientific Council.

In order to ensure the quality of the study process, the faculty's chairs / departments are actively involved in the elaboration / improvement of the educational plans, the improvement of the analytical programmes / syllabi, the elaboration of new course notes, textbooks, etc.

Examples of good practice within the chairs / departments are regularly shared in the meetings of the faculty council, chair / department sessions, etc.

3.5 LEVEL OF THE COUNCIL OF STUDIES

In the AESM, the Council of Studies is represented by the Department of Studies, Curricular Development and Quality Management (DSDCMC), which has a slightly different role from that existing in other countries studied in Work Package 2. The field of activity of this body is reduced to:

- ✓ Organization of the educational process.
- ✓ Developping and improving the AESM's curricula.
- ✓ Training and keeping track of students.
- ✓ Ensuring the operation of an institutional quality management system.
- ✓ Development of teachers' psycho-pedagogical skills.

The DSDCMC's relations with the chairs / departments are the most direct, with the chair / department coordinating the elaboratio, development and improvement of the university curricula in AESM. Although the elaboration of the educational plans is the direct responsibility of the specialty chairs / departments, their coordination lies with the Department of Studies.

For the first cycle, Bachelor's degree studies, there is elaborated and approved by Law by the Parliament of the Republic of Moldova, the Nomenclature of professional education areas and specialties for the training of specialists in higher education, first cycle, Bachelor's degree studies[89], which implies that the University has no right to provide training for the specialists at this level under study programmes other than those proposed. Of course, it is possible to introduce some new study programmes, but the process is long enough and difficult. You need to come up with well-grounded arguments about the need to create this programme with a well-formed educational plan. The dossier is sent to the Ministry of Education, which, after consulting it with the Ministry of Labor, Social Protection and Family, possibly with the Ministry of Finance, and in the case of a positive opinion it is sent to the respective committees of the Parliament. In fact, this process is not clearly described in any normative act. For this reason, the study programmes in the first cycle, Bachelor's degree studies,

[89] http://lex.justice.md/index.php?action=view&view=doc&lang=1&id=312972

are rigid enough and should provide future specialists with a more general, rather than specialized, training.

If the university wishes to start the training in a new study programme for it, but existing in the above mentioned Nomenclature, it is necessary to obtain provisional authorization from the National Agency for Quality Assurance in Professional Education (ANACIP). The study programme is developed at the level of the chair / department (or several departments), where a working team is established, which draws up all the necessary documents. Then it is discussed at the Chair/Department meeting, at the Faculty Council, and approved by the Senate.

The situation for the second cycle, Master's degree studies, is quite different. Here, the university has a greater degree of freedom in initiating new study programmes. It is necessary to prepare the dossier and to obtain provisional authorization. The dossier includes the argumentation of the necessity of training the specialists in the given field, the justification of the existence of the technical-material and research base, the teachers trained in the field. The dossier must be discussed at the meeting of the respective chair / department, then by the Council of the Master's degree Excellence School in Economics and Business, and approved in the Senate session. There is the possibility of initiating interdisciplinary master's degree study programmes. The introduction of a new module in the educational plan is usually made when the plans are updated. In this respect, the curriculum of the discipline is elaborated, it is argued its importance and necessity for the training of the specialist in the given field, the assurance with bibliographic sources. The curriculum is approved at the chair meeting.

If we refer to the evaluation practice, we will approach it from the point of view of the students' assessment at the disciplines taught. The evaluation is carried out throughout the semester. Thus, students from the first cycle, during the semester, have two tests, each having a share of 15% in the final grade obtained in the discipline. The current success (the way he / she presents himself / herself in practical lessons, seminars) is weighted at 20%. Another 10% of the final grade is the assessment of the student's individual work. The final exam grade is 40% of the student's final mark. Different methods to evaluate students' knowledge are used at each stage: from traditional evaluation questions (oral or written) to the use of various innovative assessment methods, such as testing on the Moodle platform. The peer evaluations of the students, the self-evaluation and the filling of the reflexive journals are also used. Finding their own progress must become an imminent part of their specialist training strategy, which will enable them to outline their professional growth goals and develop a lifelong learning programme[90]. It is also welcomed the use of various methods of student involvement in assessment (discussing and establishing assessment tasks, discussing and establishing evaluation criteria, testing of evaluation tasks and criteria). So, both formative and summative assessments are used. The formative assessment is carried out throughout the training process, in small and successive steps; ensures an effective periodicity of the training process, is designed to identify the strengths and weaknesses of the training process leading to a sufficiently objective analysis of the mechanisms and causes of failure or success in training. Formative assessment of students is performed continuously over the course unit / module / academic year, through tests of knowledge and skills, seminar essays,

[90] http://ase.md/files/documente/regulamente/interne/3.1_evaluare_stud.pdf

practical laboratory work, and realization of projects and applications into the specifics of the specialization.

The cumulative or final assessment is done at the end of a training period (semester, academic year, schooling cycle). The main purpose of the cumulative assessment is to highlight the effects, efficiency, and overall learning outcomes. This type of assessment highlights the level and quality of student training by reference to the learning outcomes set for the professional training. Final assessment methods are provided in the educational plan and can be: exam; verification; project; portfolio; defence of the Bachelor's degree / graduation project / thesis, depending on the study programme graduated. Assessment procedures are described in the curriculum of the discipline.

There are usually two people who take part at the final evaluation, the lecturer who held the lectures and the one who held the practical lessons. If the same teacher held both the theoretical and the practical courses, the head of the chair appoints another person from among the members of the chair who will examine the students. Evaluations are not performed by people outside the AESM.

The assessment criteria are very clearly described in the AESM's Regulation on the Organization of Studies based on the National System of Study Credits [91].

In the curriculum planning and development, students play an indirect role, which means that they are not directly involved in this activity. However, for each discipline, a questionnaire is developed and applied, in which the students express their opinion on the course and come up with proposals for improvement. Periodically, we question programme graduates, so there is a permanent feedback from the students. Students also participate in various university governing bodies, where they can express their views and come up with some suggestions.

E-learning continues to penetrate university life at both teaching-learning and assessment levels. Teachers are encouraged to use the MOODLE platform for these activities. On the MOODLE AESM platform there are currently 284 courses, of which only half are active, 178 teachers are registered with editing rights, and 12727 students are registered in the system. From 2012 to 2016, 174 teachers were trained in the use of e-learning. The technical and material basis of AESM allows this pedagogical tool to be widely used. Also, in 2015, a video studio was opened in AESM, where lessons can be recorded.

There are no programme coordinators, semester coordinators. The schedule of the lessons is developed by the Dean Office of the faculty.

3.6 INTEGRATION OF DISADVANTAGED STUDENTS

Although there is no subdivision dedicated to students with disabilities within AESM, the university takes important steps to physically endow and adapt to their needs and to create appropriate conditions for their full and equal participation in the learning process.

Annually, people with health problems or disabilities are enrolled at the 15 percent share of the total number of places provided in the budgetary matriculation plan. Also, students with severe

[91] http://ase.md/files/documente/regulamente/interne/3.0_asem_sncs.pdf

and high disabilities (degree of disability I and II) retain their status as budgetary students throughout the study period.[92]

At institutional and faculty level, it is kept track of the students with special educational needs in order to determine the individual support and assistance measures that can be offered. For example, when determining the lecture halls, in the case of academic groups where students with mobility disabilities are studying, it is taken into account that they do not have any difficulty in accessing the study block and / or the classroom.

The Dean also informs teachers about the difficulties associated with people with disabilities and discusses ways to support them such as: extending the time for examination, changing the assessment form writtent to oral examination or vice versa, providing breaks during lessons or exams and so on.

Blocks of study are equipped with access ramps for people with locomotor disabilities. In the study blocks there are lifts that allow people to move upstairs.

3.7 PHYSICAL ENVIRONMENT

The Academy of Economic Studies of Moldova ensures a favorable physical environment for both students and the entire academic community. The university campus consists of 6 blocks of study with a total area of 40560 m², of which 61% are allocated to study spaces. The upgraded infrastructure, as well as the material and learning resources, make it possible to successfully organize the student-centered learning process.

The AESM's Scientific Library is the holder of the largest collection of publications with economic profile in the Republic of Moldova, benefiting from the right of legal deposit of the treasury of publications appearing on the territory of the country and abroad.

The collection of the AESM's Scientific Library currently constitutes 213182 storage units (52457 titles) of books, serials, video-materials, scientific articles, etc. The library has 5 reading halls, a lending center, a reference room, the Multimedia Center, the EU Information Center (EUI) and the World Bank Public Information Center. The reading halls have a total capacity of 385 seats and the AESM's Multimedia Center, with a surface of approximately 300 sqm, is equipped with 80 high-performance computers connected to the Internet, printers, scanners, CD readers and recorders. exclusively dedicated to the individual work of the students. The working hours of reading halls are 6 days a week, Monday-Friday between 8.00 and 19.00, and Saturday from 9.00 to 15.00.

The Scientific Library provides access and information support to the study and research process by providing an electronic catalog, a component part of the e-library created in the Republic of Moldova. Each user can access the PRIMO electronic catalog http://primo.libuniv.md, where he / she can find the necessary information in the collections of the AESM's Scientific Library, as well as in the collections of the partner libraries.

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[92] Regulation on the conditions for filling places with budget financing in AESM, at Cycle I, Bachelor's degree studies, DS 10 of February 26, 2014, available at http://www.ase.md/files/documente/regulamente/interne/2.7_reg_locuri_bugetare.pdf

Throughout the university campus access to the Internet is ensured. The study halls are equipped with technical means of training (computers, videoprojectors, etc.). AESM has 28 computer rooms for training, 6 computer rooms for student individual work, the Multipoint Video Conferencing Center. The modernization of classrooms, laboratories / computer rooms is carried out constantly at regular intervals.

In order to facilitate distance learning, in February 2004, Moodle was implemented at AESM. Various embedded packages and computer applications such as eViews, SPSS, Wiscount, 1C Accounting, Mathlab etc. are used in the training process.[93]

3.8 STUDY PROGRAMME LEVEL

The *Business and Administration* study programme offered by the Academy of Economic Studies of Moldova aims at training specialists for activities related to the successful management, initiation and administration of businesses within economic entities, regardless of their size and field of activity, in non-commercial associations and public institutions.

The duration of the studies in Business and Administration is 3 years, respectively 6 semesters. Each academic year has 60 transferable study credits in the European system (ECTS) for mandatory and optional disciplines, while the total number of transferable study credits for the whole first cycle, Bachelor's degree studies, is 180 (excluding optional subjects). 1 ECTS equals 30 hours of work per student. The annual workload of the student is 1800-1860 hours, and the total amount of 5160 hours, including 2454 hours (48%) of direct contact and 2706 hours (52%) of individual study.

Study disciplines / course units in the educational plan are provided in a logical sequence, aiming at the accumulation of fundamental and specialized knowledge, ensuring compatibility with the *National Qualifications Framework for the field of professional training 363. Business and administration*[94] and similar study programmes from the European Union.

In total, the study programme includes 38 course units, each of which has a number of study credits. The study programme contains fundamental courses (53 credits), disciplines that develop general skills and competences (15 credits), disciplines with a socio-humanistic orientation (14 credits), specialty orientation (70 credits), internships (18 credits), and the Bachelor's degree thesis (10 credits).

In the first and partly in the second year, the bachelor's degree study programme encompasses fundamental disciplines in economics, computer science, mathematics and statistics. In the second year, the study programme includes specialized disciplines, including a 4-week (production) internship (6 credits). At the end of the internship period, the student draws up a report that is evaluated by the supervisor / responsible teacher. In the third year, the study programme includes

[93] AESM's Informatization Strategy for the period 2010-2015, DS 4/1 of 24 December 2009, available at http://ase.md/files/documente/regulamente/interne/1.6_strategia_iasem.pdf

[94] National Qualifications Framework: Higher education: cycle I, Bachelor's degree studies; cycle II, Master's degree studies; Doctorate: General Study Field 36. Economic Sciences: Professional Training Field 812 Tourism / Min. Education of Rep. Moldova. - Ch.:S. n., 2013 ("Bons Offices" Printing House). p. 67 - 91 http://edu.gov.md/sites/default/files/cnc_36_812-stiinte_economice.pdf

only specialized courses, the bachelor's degree internship (12 credits), finalizing in the 6th semester with the elaboration and the defence of the bachelor's degree thesis, which can be elaborated individually or in a team consisting of 2 or 3 students.[95]

The educational plan for the Business and Administration study programme was developed by the Chair / Department of Management at the Faculty of Business and Business Administration.

Successful completion of the studies offers graduates of the Business and Administration study programme the opportunity to become an economist, manager, entrepreneur, project coordinator, consultant / instructor, civil servant, etc. Graduates of the first cycle can continue their studies in the 2nd cycle, master's degree.

For each course unit included in the educational plan the curriculum (analytical programme / syllabus) is developed. It includes the following elements: Course title / Course holder / Course code / Year / Semester / Number of credits accumulated / Language of instruction / Final assessment form / Number of hours (direct contact: theoretical course / seminar / laboratory activities / practical training and individual study) / Course formative category / Course option / Maximum number of students who can enroll in the course / Access conditions / Fundamentals / Objectives / components developed within the course and learning outcomes / Course content / Minimum bibliography / Teaching technologies (Dominant forms of organization; Teaching methods; Didactic means) / Final assessment method / Establishing the final grade (expressed share) / Total time (hours per semester) of the individual study activities requested from the student.

The curriculum of the course (analytical programme / syllabus) is developed by the course holder according to the internal regulations of the AESM (Regulation for the organization of studies on the basis of the National System of Study Credits, AESM's Methodology regarding the elaboration and approval of the analytical programme, IM7.5 / 3 etc.). Their content is updated at the beginning of each academic year by introducing new knowledge resulting from scientific research, including own research, new bibliographic sources, etc. and approved at the meeting of the faculty council.

In order to enhance the quality of the teaching and meet the requirements formulated by the beneficiaries, the Business and Administration study programme is monitored and evaluated periodically through the following activities:

- Questioning students:
- assessment of teaching quality
- assessing students' satisfaction with the conditions and services offered by AESM;
- Questioning employers;
- Questioning AESM's graduates.

An important role in developing / improving the study programme and the analytical programmes is given to employers and graduates who are invited as consultants in their process of elaboration and improvement (form of expertise), in the organization of production and bachelor's degree internships (the form of the corresponding agreements), during the the bachelor's degree

[95] Regulation on the development in team of the bachelor's / master's degree thesis, DS no. 3 of December 24, 2014, available at http://ase.md/files/documente/regulamente/interne/3.4_teza_echipa.pdf

examination (formulation of the problem / topic of the bachelor's degree thesis) (participatory form) etc.

The students are also involved in the elaboration of the educational plans, of the analytical programmes, who, as beneficiaries, participate in various surveys and evaluate the courses / teachingstaff, also through their representatives in the faculty council, and the Senate, students participate in the decision making process regarding the initiation / modification of the study programmes, approval of analytical programmes, etc.

The modification of the educational plans is carried out at the chairs providing the respective study programme and is approved by the Faculty Council. The review / update of the educational plans is validated by the AESM's Senate and submitted to the Ministry of Education every 5 years for coordination.

Enrollment in AESM's study programmes is done transparently on the principle of equality of opportunity for all candidates and in accordance with the ASEM's Regulation on the organization and conduct of admission, for the first cycle, Bachelor's degree studies[96], elaborated on the basis of the Framework Regulation on the organization of admission in the cycle I - Bachelor's degree studies, approved by order of the Ministry of Education. The institutional regulation is updated annually.

Candidates, holders of Baccalaureate, college or higher education diplomas / degrees have the right to apply to one, two or three specialties / fields of training in AESM's admissions, but shall be enrolled in one specialty only.

The enrollment, in accordance with the Admission Plan, is made in descending order of the average competition grade of the candidates within the limits of the number of places established for each specialty, the form of education, the category of candidates and the source of financing. The enrollment at the places by contract with the payment of the study tuition fee is made from amoung the candidates admitted under the last admitted candidate to the places financed by the state budget, in descending order of the average competition grade, at the written request of the candidates.

Year-to-year promotion is an annual procedure and is based on the *Regulation on the promotion of the year of studies* **[97]** that determines the organization and deployment of the promotion process by the student or master degree student of the study year in the AESM.

Student registration in the next year of study is conditional upon the accumulation of minimum of 40 (30 for part-time education) credit points at the compulsory course units / modules provided in the Annual Study Contract for the current academic year and the accumulation of the total number of credit points, provided by the educational plan for previous years of studies, and the year of completion of university studies.

The teaching-learning-evaluation process within EASM is carried out more and more by using ICT tools, especially the e-Learning platform - MOODLE. This is highly appreciated by students

[96] http://www.ase.md /files/admitere/reg_licenta_2016_3.pdf

[97] Regulation on the promotion of the year of studies, DS no. 10 of 29 June 2012, available at http://www.ase.md/files/documente/regulamente/interne/3.6_promovare.pdf

because they can learn taking into account their personal rhythm, anywhere, anytime; all course materials are located in one place; students can self-assess themselves, and the Forum allows students to interact with the teacher and get informed from the primary source, etc.

The workload of the teaching staff in AESM is 1470 hours per year, representing 35 astronomical hours per week.[98]

The workload of the academic staff includes: classroom didactic activity, didactic activity outside the classroom, research activity, technological transfer and methodical activity and is recorded in the individual plan, drawn up for the whole year of study, in accordance with the chair's activity plan. The individual plans of the teaching staff are discussed at the chair meeting, endorsed by the management of the respective subdivision, by the Dean, as well as by the First Vice-Rector, and the individual plan of the Head of the Chair is approved by the Dean and approved by the First Vice-Rector.

Lectures taught in the first cycle, Bachelor's degree studies, for series of studies with a number of students over 75, as well as those taught in cycle II, master's degree studies, using interactive, innovative teaching and evaluation methods (.eg. E-learning, MOODLE, Problem-Based Learning etc.) are allocated with the additional workload coefficient of 1,5.

For the teacher's guidance of the students' individual activity, there is allocated: 1 hour / student in the first cycle, Bachelor's degree studies, and 2 hours / student in the second cycle, Master's degree studies, and for the coordination of the internships with the verification of the reports and the examination of the acquired knowledge - 3 hours / student.

5 hours / project is allocated for the supervision of the annual project, and for the supervision of the Bachelor's degree thesis - 23 hours / student, including 3 hours for bachelor's degree internship.

In the case of evaluations / assessments the following norms are applied:

- current assessment: 2 hours / academic group,
- promotion exam:
  - oral / computer-aided - 1 hour / 3 students
  - in writing - 1 hour / 2 students.
- Bachelor's degree exam: 1 hour / student.

The workload of students is measured in transferable credits. Thus, an ECTS credit equals 30 hours of work for students.

The student's learning activity as well as the learning outcomes and competences acquired by the student are verified and appreciated through assessments. Depending on the learning outcomes and competences to be acquired by the student, assessment during the deployment of the course can be done by: tests, reports, individual papers, portfolios, essays, case studies, annual project, etc.

[98] Regulation on establishing the workload regarding the scientific-didactic activity of A E SM staff, DS 7 of 29 June 2016, available at http://ase.md/files/documente/regulamente/interne/2.21_reg_normare1.pdf

All disciplines included in the Business and Administration study programme are completed with exams, except for Physical Education that completes with the test: verification.

According to the Regulation on the assessment of students' learning activity[99], two sessions of current assessment (tests) are organized during the semester. Students are proposed both dual and / or multiple choice tests as well as problem solving or case studies, including evaluation on the MOODLE platform. Also, the current assessment includes individual work and current success. The results of the current assessments are taken into account in the final semester assessments, with an average weight of 60 percent of the final course unit / module grade.

The student who has received grades under „5" in current assessments is not admitted to the final assessment. Assessments at the end of the course are conducted through exams that can be either oral, written or combined. About the form of exam students are announced by the teacher at the beginning of the semester.

The final grade is established by calculating the average grade for the results obtained in the current assessment, tests and exams.

The final assessment of the AESM's study programme includes a single test: public defence of the bachelor's degree thesis. The bachelor's examination assesses the level of achievement of the learning outcomes, the generic and specific competences acquired by the graduates during the studies and the competences of the graduates to carry out researches, to apply the theoretical knowledge in the elaboration of practical solutions specific to the field of professional training or realization of case studies.

Students who have not fully completed the educational plan and have not obtained credits for all compulsory and optional course units and internship are not admitted to the Bachelor's degree exam.

The results of the student's final assessments are recorded in the tally-sheets by the responsible teacher. The tally-sheets will include mandatory information on the results of interim evaluations, the grade /mark in the national grading system and the grade according to the ECTS grading scale, the number of credits accumulated.

Students' grades are included in the AESM's information system. The results obtained for exams by each student are placed on the AESM's website - Success *(*http://ase.md/student-asem/reusita.html*)*.

In order to prevent cheating and plagiarism in AESM, the following provisions were formulated in the University's Code of Ethics:

- at the first minor violation, the teacher, the course or seminar holder, after revealing the case of plagiarism or cheating, penalizes the student by warning and lowering the grade, offering advice to the student on how to proceed in the future;
- in significant cases of repeated minor plagiarism, of extended or total plagiarism, the grade will be reduced proportionally until the examination is canceled;

[99] Regulation on the assessment of students' learning activity, DS 6 of 14 March 2012, available at http://ase.md/files/documente/regulamente/interne/3.1_evaluare_stud.pdf

- plagiarization of bachelor's or master's degree thesis is sanctioned by canceling the exam.[100]

Starting with 2013, all AESM's graduates are required to submit the bachelor's degree thesis in printed and electronic format to be verifyed against plagiarism in the Anti-Plagiarism System of AESM. They also sign the *Declaration on their own responsibility*, stating that the thesis was developed independently and has never been presented to / defended at another faculty or higher education institution in the country or abroad, and the copy presented and registered at the chair / department corresponds entirely to the electronic variant placed in the anti-plagiarism system.

In case the plagiarism control subsystem automatically detects a plagiarism situation, the head of chair / department shall draw up a report / minute on finding plagiarism which is submitted to the Faculty Jury. If after the examination of the case by the Jury the fact of plagiarism has been proved, by the clear proof of the plagiarism with the indication of the text copied, including those on the Internet, the thesis is not admitted for the defence.

In case the plagiarism is detected by the Bachelor's / Master's degree Examination Committee, during the defence of the thesis, the thesis will be assessed with the grade 1 „one".

The plagiarism act is recorded in the student's personal file. Repeated detection of the plagiarism case of the thesis will lead to the non-admission to the final exam of the student in the future.[101]

In case the student disagrees with the results of the final evaluation, he / she can appeal to the Faculty Jury, within 24 hours from the announcement of the grade. If it turns out that the student has not been properly assessed, the Jury may cancel the grade and arrange for the establishment of a three-person examination committee to repeat the examination. The examination committee does not include the teacher who taught the course.[102]

Likewise, students have the right to challenge the decision of the Bachelor's degree Committee. Applications for appeals shall be submitted within 24 hours of the announcement of the results of the Bachelor's degree examination and shall be registered by the Secretary of the Bachelor's degree Committee in the Register of Evidence of Appeals.

Appeals will be reviewed by the Bachelor's degree Committee the day after the expiration of the deadline for appeals. The Bachelor's degree Committee re-checks and allocates grades to the disputed theses. Changing the disputed grade with the grade granted after reviewing the contestation will be done by increasing or decreasing it, but remaining to be the final one. Examination of appeals shall be recorded in separate minutes, signed by the members of the Bachelor's degree Committee

[100]The Code of Ethics of the Academy of Economic Studies of Moldova, DS no. 7 of 21 February 2007, available at http://ase.md/files/documente/regulamente/interne/2.3_codul_etica.pdf

[101] Regulation on the prevention of plagiarism among students / master's degree students, DS no. 5 February 27, 2013, available at http://ase.md/files/documente/regulamente/interne/3.3_reg_plagiat.pdf

[102] Regulation on the organization of studies in AESM based on the National System of Study Credits, DS nr.3 of 23 December 2015, available at http://ase.md/files/documente/regulamente/interne/3.0_asem_sncs.pdf

and the members of the Supervisory Committee who participated in the examination of the appeal. The Bachelor's degree Committee operates the changes following the appeals.[103]

According to the Regulation on the organization of studies in higher education based on the National System of Study Credits [104] evaluation of learning outcomes in the Republic of Moldova is done with grades from „10" to „1". Grades from „5" to „10" make it possible to obtain the credits allocated to them, according to the educational plan. In addition to the national grading system, the grading scale recommended in the European Credit Transfer System (A, B, C, D, E, FX, F) is also used to complememt the diploma supplement and facilitate academic mobility.

Table 5. ECTS grading scale

Grade	Evaluation	Equivalent ECTS	The student has mastered the material included in the curriculum of the course
9,01 – 10,0	excellent	A	91 – 100%
8,01 – 9,00	very good	B	81 – 90%
7,01 – 8,00	good	C	71 – 80%
6,01 – 7,00	satisfactorily	D	61 – 70%
5,00 – 6,00	weak	E	51 – 60%
3,01 – 4,99	unsatisfactorily	FX	31-40% and respectively 41 – 50%
1,00 – 3,00	unsatisfactorily	F	0 – 30%

Source: Regulation on the organization of studies in AESM based on the National System of Study Credits, available at http://ase.md/files/documente/regulamente/interne/3.0_asem_sncs.pdf

Assessment of learning outcomes and competencies is usually done by the course's holder lecturer. Individuals outside the AESM assess student competences within internships (internship supervisors from the company). Also, the existence of the external examiner is mandatory in the case of the higher education completion examinations as the Chairman of the Bachelor's degree Examination Committee. Based on the proposal of the institution, the Minister of Education appoints, by virtue of an order, a specialist in the field (university professor, associate professor, scientific researcher, holder of honorary degrees, highly qualified practitioner) who does not work within AESM. A person may not be appointed Chairman of a Bachelor's degree Examination Committee for more than two consecutive years.

Organizing studies on the basis of ECTS has enabled AESM students to participate in various academic mobility programmes.

[103] Regulation on the organization of the final examinations for Bachelor's degree studies in ASEM, DS no. 3 of December 24, 2014, available at http://ase.md/files/documente/regulamente/interne/3.2_examen_licenta.pdf

[104] Regulation on the organization of studies in higher education based on the National System of Study Credits, Order of the Ministry of Education no. 1046 of October 29, 2015

Agreements between partner universities (faculties) guarantee the recognition of periods of study, their content and credit transfer for course units / modules carried out. The student involved in mobility programmes on the basis of partnership agreements signed between AESM and the host institution will submit the Transcript of grades / Extract from the ECTS tally-sheet upon return. The equivalence of course units and credits will be done at faculty level, by a commission constituted by the dean's order.[105]

Credits obtained at similar course units as expected learning outcomes, content, eventually name and extension (number of hours in the educational plan) are automatically equated.

The student who chooses course units with a content overlap of at least 2/3 accumulates the credits allocated to only one of them.

The courses promoted under the mobility programme are included in the student's Diploma Supplement, with the indication that the respective period of study was conducted within an academic mobility programme. Registration of the courses promoted at the host institution will be done using the names of the courses in the AESM's study programme, they were equated with. Courses that have no equivalent in AESM's study programme are recognized in the packages of free choice courses and constitute additional credits.

In order to evaluate the quality of the teaching of the courses, the improvement of their content and the methods of teaching, the Department of Studies, Curricular Development and Quality Management periodically questions students. Questionnaires are not signed by students, and processed results are made available to the teaching staff under evaluation only after the examination session, so as not to subjectively influence students' knowledge grading.

The analysis of the results of the evaluation of the academic staff is done at the level of the chair / department and of the institution. Effective measures for continuous improvement are taken after the analysis.

AESM has institutional procedures for tracking the employment and professional development of graduates, which are carried out by the Career Guidance Center. Monitoring is carried out in dynamics, the first - at the time the diploma is issued, then at 6 and 12 months after graduation. [106]

As far as the monitoring of the professional path is concerned, this is this happens in the 5th year after the graduation of the study programme. It is also kept track of the continuation of graduates' studies at Master's degree studies and doctorate.

The Graduates' Association was founded at AESM in April 2016, graduate experiences can make a substantial contribution to improving study programmes.

AESM provides remote access to numerical information, including: the electronic catalog of OPAC bibliographic records; numerical publications on CDs; external numerical resources

[105] Regulation on academic mobility in AESM, DS no. 4 of 2 March 2016, available at http://ase.md/files/documente/regulamente/interne/3.11_mobilitate.pdf

[106] The Regulation on the monitoring of the employability and professional path of graduates of AESM, DS no.3 of 2 November 2016, available at http://ase.md/files/documente/regulamente/interne/2.22_Reg_traseu_profesional_absolventi_ASEM.pdf

(EBSCO, INTAS PERI databases, the European Documentation Center and the World Bank, Legislation of the Republic of Moldova) based on subscription, contracts, licensing, etc.

3.9 PEDAGOGICAL TRAINING LEVEL

Pedagogical training of teaching staff is becoming more and more important. First of all, with the entry into force of the Education Code, it is mentioned the need for accumulation of 60 transferable study credits through the psycho-pedagogical module during the studies or in the first year of activity in higher education. This provision refers to graduates of non-pedagogical specialties. It does not specify where exactly these pedagogical skills can be accumulated. At the same time, within AESM, as mentioned above, the necessary conditions for the training and development of teachers' pedagogical ckills are created. Thus, AESM offers new teachers coming to university the opportunity to acquire the necessary knowledge in the psycho-pedagogical field and to accumulate the necessary number ofstudy credits. For AESM employees, these courses are free of charge. Students enrolled in the second cycle, master's degree studies, or teachers from other educational institutions can also enroll in the courses. The DSDCMC is responsible for organizing the psycho-pedagogical module. At the same time, the Department of Human Resources is involved in the continuous development and training of staff. Within this Department, the employees' records, the training courses they have attended, are kept. At least once every five years, all teachers are required to undergo a pedagogical training course (apart from the 60 study credits mentioned) and an internship in enterprises in the real sector of the national economy. Evidence is kept by the employees of the Department of Human Resources and is taken into account when people take part in the copetition for didactic-scientific positions.

For the academic year 2016-2017, in order to develop the teachers' competences, the following pedagogical training courses were proposed: *„Problem-Based Learning – PBL" (information on this course is presented in Annex 3), „Innovative teaching-learning-evaluation methods in professional education", „Psychology. Personal development of the teaching staff", „Application of informational communication technologies in training. Moodle System", „Deontology and effectiveness of didactic communication".*

4 CROSS-CASE ANALYSIS

4.1 INTRODUCTION

In this chapter we will make a comparative study between the Moldovan higher education system and the education systems of the European states: Denmark and Great Britain, highlighting both the similarities and the main differences, thus trying to highlight the shortcomings and strengths of the local system, but also ways which can improve and make Moldovan education more efficient. We will not focus on the whole system or on the whole spectrum of issues. Obviously, the focus will be firstly on the use of student-centered teaching methods, and secondly, we will continue to guide on the proposed methodology.

4.2 COMPARATIVE ANALYSIS: CRITERIA, PROPERTIES AND INDICATORS

Here we present synthetically the comparative situation in 3 universities under the indicators and criteria at each level: AESM (Republic of Moldova), AAU (Denmark), UoG (Great Britain).

Table 6. Cross-case analysis

Criteria, properties, indicators	AESM	AAU	UoG
L1 System level ***L1 System level***			
1.1. Acreditation of study programmes	For the purpose of accreditation, the Independent Agency ANACIP was founded. At the first stage, the study programmes of the 1st cycle, Bachelor's degree studies, then the study programmes of the 2nd cycle, Master's degree studies, then of the 3rd cycle, doctorate, are accredited. After that, the whole university may be subject to accreditation. According to the Education Code, the results of accreditation will be the basis of the ranking of universities, and then the financing	The university has already been subject to accreditation on study programmes, so it has passed at a higher level when the University was assessed in its entirety and obtained the university accreditation certificate. Indicators are developed, according to a determined methodology, which allows the evaluation of the university.	The accreditation of the study programmes is done with the involvement of three organizations: the Privy Committee, the Agency for Quality Assurance in Higher Education, the Council for Higher Education Financing in England.

	of universities will depend on this. Indicators are developed in order to evaluate study programmes.		
1.2. National quality assurance system.	In the Republic of Moldova, the National Agency for Quality Assurance in Professional Education (ANACIP) is responsible for ensuring an integrated, credible, objective and transparent system of external evaluation and accreditation of institutions and study programmes.	In Denmark, the Accreditation Agency is also in charge with the quality assurance issues. The structure and functions of the continuous quality assurance system in the university are predetermined by the criteria defined in general in the University Act and in the Order of the Minister ”Criteria for the Revelance and Quality of University Study Programmes and on Procedures for Approval of University Study Programmes”.	In the UK, the national quality assurance body is the Quality Assurance Agency for Higher Education (QAA).
1.3. Professional bodies involved in accreditation.	The study programme Business and Administration does not require accreditation by professional bodies. It is welcomed the opinion of a professional association regarding the usefulness of the educational plan for the economic environment.	There are no professional bodies that contribute to the validation of Business and Administration study programmes or the way they are carried out, but within the university there are advisory bodies at the level of each Study Board, composed of competent and notorious external persons.	The Business Management study programme does not require the involvement of professional bodies in the accreditation process, although there are consultations with the business community.
L2. University management level			
Criterion 1. *University governance, management and organization bodies*	There is no clear delimitation between the governing and management bodies. The system of governing bodies consists of the Senate, the Council for	The university Board and the Rector. It is a unitary management structure.	Governing Bodies: Council, Vice-Rector, Academic Committee, Secretary, Student Organizations. The existence of a university-level service ”Help Zone”, that has the competence to assist, help,

	Institutional and Strategic Development, the Scientific Council, the Faculty Council, the Administration Council, and the Rector.		guide students throughout their studies, facilitates the educational process.
Criterion 2. *Institutional strategy of the university, incorporating the curriculum strategy with a focus on student-centered learning*	The quality of studies and the training of graduates for future employment is a priority objective for AESM. In this respect, the use of student-centered teaching methods is encouraged. In the AESM Charter, Chapter VII „Promoting student-centered education" is dedicated to this topic. In the AESM's STRATEGIC DEVELOPMENT PLAN for the period 2012-2017 there is mentioned: „Promoting flexible and innovative teaching methods, an effective means of ensuring this by capitalizing on the opportunities offered by information and communication technologies, including to support personalized and interactive learning, distance learning, virtual mobility, etc., and the strengthening of the knowledge transfer infrastructure is necessary for this purpose"	In Aalborg University there is an institutional commitment to learning and innovative teaching that is laid down in the 2016-2021 university strategy, focusing in particular on problem-based learning and student employability.	The UoG's Strategic Plan (2012-2017) provides for the development of student-centered education.

Criterion 3. *Quality assurance bodies at university level*	In order to coordinate the quality assurance in AESM at the level of the Senate, the Quality Council is established, which has an advisory role in substantiating the decisions regarding AESM's quality policy and objectives. The Council is composed of seven members and is coordinated by the Rector of AESM, as chairman. The members of the Quality Council are valuable personalities who have been noted for professional performance. The Quality Council also includes students with very good learning outcomes[107]. In order to implement the quality policy and objectives in AESM, there is the Department of Studies, Curricular Development and Quality Management of AESM headed by a director.	At Aalborg University there is a Group responsible for quality assurance and development. (University's Steering Group for quality assurance and development). This Group is responsible for systematically supervising internal quality and improving the quality system, developing the quality domains within the university.	UoG is constantly concerned with ensuring a high quality of the entire study process, which would allow the training of highly qualified specialists. In order to achieve this goal, there is a quality assurance management structure, but the supervision of all quality assurance procedures within the University is within the competence of the Academic Council.
Criterion 4. *Pedagogical training of teaching staff and their continuous training*	It is obligatory for teachers without pedagogical training to attend the psycho-pedagogical module in the amount of 60 study credits. It is provided in the AESM that in order	A Learning Lab is created at the Aalborg University, which offers pedagogical qualifications obtained through the Adjunktpaedagogikum (national qualification) and the possibility of	The UoG welcomes the participation of teachers, especially young ones, at various organized events. There is the Department of Continuous Teacher Training. Each teacher is

[107] The concept of quality assurance system of studies in AESM, p. 8, available at http://ase.md/files/documente/regulamente/interne/1.3_conceptul_calitatii.pdf

	to be able to participate in the competition in order to hold a scientific-didactic position, you must have a training in the pedagogical field and one in the real sector of the economy in the last 5 years.	continuous learning. We also mention the PBL Academy, which favors this direction.	obliged to attend certain courses.
L3. Faculty / department level			
Criterion 1. *The role of the faculty in the communication with stakeholders with regard to student-centered teaching and learning*	The faculty communicates more widely with students and teachers who have classes at that faculty. There is the right to refuse certain professors who do not meet certain requirements imposed or are unapproved by the students. Chairs have a greater involvement in student-centered teaching, imposing certain standards on its members.	Faculties and chairs / departments are part of the internal organization of the university, where meetings are organized to share examples of good practice and performance in student-centered teaching and learning.	Both the faculty and the department, through its members, are involved in student-centered teaching and learning.
L4. Level of the Council of Studies			
Criterion 1. *Structure of the body responsible for studies*	The body responsible for organizing the studies is AESM is the Department of Studies, Curriculum Development and Quality Management, which works with chairs / departments to develop educational plans, syllabi of the disciplines.	The Study Board manages one or more study programmes and is instituted and abolished by the Dean of the faculty after consultation with the members of the departments responsible for these programmes. Each Study Board must include an equal number of teachers and students' representatives elected by academic staff and students respectively.	There is a body responsible for organizing studies at the faculty level.

Criterion 2. *Analysis of the evaluation practice*	The assessment has a continuous character and includes the current assessment (during the practical classes), the evaluation through test (2 times per semester), the final evaluation (at the end of the course, during the session). Examination is done in writing, orally or computer-aided. There can be test with variants for the answer, case scenarios, tests etc.	The University uses various evaluation methods, peer evaluation, monitoring of the evaluation, inclusion of an external evaluator.	The evaluation methods, very diversified, depending on the course, teacher, are stipulated in the discipline curriculum. There are regulations that students know before starting the course and know exactly how the assessment will be done, what is the share of each type of evaluation. The evaluation has a continuous character.
Criterion 3. *The way to develop a new study programme*	For Cycle I, Bachelor's degree studies, it is very complicated. At the chair / department level, a working team is formed, who develops the educational plan, arguing the need to initiate such a study programme. Internally, it must be approved at the meeting of the faculty, faculty council, and Senate. If this study programme exists in the nomenclature of specialties, than it is necessary to obtain provisional authorization from ANACIP. If this study programme is absolutely new, it is necessary to enter this programme into the Nomenclature of Specialties. This is done by Government Decision.	The initiative to initiate a new study programme in Cycles I and II comes, as a rule, from a teaching staff, group of teachers forming the programme team or from a research group. At the faculty there is an experienced legal adviser in the field of education who helps the team to develop the document package. The Dean signs this package after rigorous legal scrutiny. The study programme is approved by the Dean, then subjected to evaluation at the academic board level.	The initiator of a new Bachelor's degree study programme in the UoG is the Department, where a programme committee is formed, which argues, and then elaborates the curriculum of the study programme. The study programme is discussed within the Department, then by the Faculty's Academic Committee. A special role is assigned to professional associations. The requirements for design, development and monitoring of study programmes are described in the Quality Code.

Criterion 4. *Involvement of students in the development of study programmes*	Students are not involved directly in developing the study programme. However, indirectly, they are involved by including representatives in the Faculty Council, in the AESM's Senate where these documents are discussed and voted, where they can express their views. Also, students are questioned with regard to the course or on the whole study process.	Students are 50% involved in study boards, but also in other bodies. The role of the students is double: they directly participate in and influence the evaluation of teachers and study programmes and also have the possibility to influence the evaluation by participating in the study board.	Students are involved in the evaluation of teachers, study programmes and courses.
Criterion 5. *Periodic monitoring and analysis of study programmes*	From the regulatory point of view, the revision is carried out every 5 years. Annually, the feedback from students, graduates, employers is obtained, which allows for an analysis and, if necessary, to initiate the review procedure.	The review of the study programmes is done every semester, 8 annual meetings are organized for this purpose.	They are analyzed annually, including through feedback from students, employers.
L5. Integration of disadvantaged groups of students			
Criterion 1. *The existence of a body dealing with students with disabilities*	AESM does not have a subdivision dedicated to students with disabilities, yet at the institutional level and at the faculty level their record is kept to determine the individual support and assistance measures that can be offered	We did not notice the existence of this body at Aalborg University.	At the UoG there is the Help Zone office in every campus.
Criterion 2. *Ways of working with disadvantaged students in relation to teaching*	Important steps are being taken to create minimum conditions so that they are not marginalized.	All conditions are created so that they are not marginalized.	They work very hard with them through the HelpZone office. The range of services they can benefit from is very broad, including issues

	Counseling is done by the group supervisor.		related to teaching, learning, assessment.
L6. Infrastructure (physical environment)			
Criterion 1. *Ensuring facilities tailored to the needs of people with disabilities*	AESM makes efforts and takes measures to adapt the infrastructure so as to ensure the access to education for students with disabilities. Each block of study has access ramp for people with locomotory problems, there are lifts.	There is an infrastructure that provides access to studies and offers learning opportunities to students with disabilities, including the visually impaired ones.	The infrastructure provides access to studies and offers learning opportunities for students with disabilities
Criterion 2. *Existing facilities for students to support problem-based learning*	AESM has a modernized infrastructure, with well-equipped study halls, campuses, scientific library, WI-FI connection, etc.	The University has a very good infrastructure, with well-equipped study halls, campuses, libraries, WI-FI connection, and so on.	There is a very good infrastructure at the university, with well-equipped study halls, campuses, libraries, WI-FI connection etc.
L7. Study programme level (Business and Administration)			
Criterion 1. *Structure of the Business and Administration study programme*	The duration of the studies is 3 years, 6 semesters respectively	The duration of the studies is 3 years, 6 semesters respectively	The duration of the studies is 3 years, 6 semesters respectively
Criterion 2. *Student's workload*	The workload is calculated in transferable credits*:* for one academic semester - 30 ECTS; for one academic year - 60 ECTS. 1 ECTS equals 30 hours of work per student.	In Denmark, each year of study is equivalent to 60 ECTS, respectively each semester, 30 ECTS. 1 ECTS equals 27 hours of work per student.	In the United Kingdom, the workload for one year is 120 CAT. 1 ECTS equals 2 CAT, 1 CAT is equivalent to 10 hours of student work
Criterion 3. *Student assessment*	- There is a Regulation on assessment of the student learning activity, explaining the types of evaluations performed at AESM, the arrangements for organizing and conducting the exams, the evaluation scale	- Each curriculum contains information about the types of examinations, how they are performed, the requirements for the answers students have to give. - There are Regulations that explain in detail every possible situation.	- Each curriculum contains information about the types of examinations, how they are performed, the requirements for the answers students have to give. - There are Regulations that explain in detail every possible situation. - The assessment is based on certain skills that students

	- The assessment is based on certain competencies acquired by the student. During the semester, two sessions of the current assessment (tests) are organized, proportionally distributed during the semester, in which the intermediate status of the student's progress is determined. The test's share is 15% of the final grade. Also in the final grade is included in the individual study with 10%, current success - 20% and final test - 40%.	- The assessment is based on certain skills that students must demonstrate. În Universitatea din Aalborg utilizarea pe scară largă a proiectelor în echipă aduc un specific și evaluărilor. At Aalborg University, the use at a large-scale of team projects brings out the specifics to the assessments.	must demonstrate. The UoG publishes separate principles and procedures for assessing students with disabilities.
Criterion 4. *Involvement of teaching staff, students, graduates, employers in the design, management and improvement of the study programme*	Typically, only teachers are directly involved in designing a study programme. However, before putting certain courses on paper, students, employers, graduates are consulted either through different questionnaires, ororganizing different round tables, etc. So, more parties are indirectly involved in the development and improvement of the study programme.	Several actors are involved in the elaboration, development and improvement of a study programme: teaching staff, students, employers, graduates, both directly (through participation in different committees) and indirectly (through responses to questionnaires, other feedback).	Several actors are involved in the elaboration, development and improvement of a study programme: teaching staff, students, employers, graduates.
Criterion 5. *Avoiding and punishing cheating and plagiarism*	At the institutional level, there is the Code of Ethics of the University, the Regulation on plagiarism prevention among students / master degree students, which clarifies what the	At Aalborg University there is a special VBN portal that tests all the projects, the bachelor's and master's degree theses against plagiarism.	Gloucestershire University has been using the Turnitin plagiarism detection software since autumn 2015

	plagiarism is, what are its consequences. In AESM, each graduate is required to submit the thesis, in electronic format, in the AESM's Repository (anti-plagiarism system) for the verification of the degree of plagiarism.		
Criterion 6. *Student appeals*	The grade awarded by the examiner may be disputed on a regulatoru basis. Students can challenge the results of the final examination within 24 hours of the notice of the grade. If it turns out that the student has not been properly assessed (underassessed or overassessed), the Jury may cancel the grade and arrange for the establishment of a three-person examination committee to repeat the examination. The examination committee does not include the teacher who taught the course.	There are Institutional Regulations stipulating the conditions when appeals can be submitted, how to resolve them.	There are Regulations that stipulate in great detail the conditions when appeals can be submitted, how to resolve them.
Criterion 7. *The current grading system*	Assessment of knowledge is appreciated with grades from 10 to 1. Grades from "5" to "10", obtained as a result of the evaluation, allow obtaining the credits allocated to them according to the educational plan. The final grade results from	In Denmark, a grading system based on 7 scales, consisting of five positive grades 0, 2, 4, 7, 10, 12 and two negative grades 00 and -3, is used.	In the UK, the grading system is expressed in percentage and in letters. Thus, 70-100% equals to A, 60-69% - B; 50-59% - C; 40-49% - D. These are the promotion grades. Those below 40% are not promotion grades.

	the average sum of the grades from the current valuations and the final examination and is accurately entered with a semicolon.		
Criterion 8. *Role of the external examiner*	External examiners are required in the case of the completion exam of the higher education. They are appointed as Chairmen of the Bachelor's degree Examination Committees by order of the Minister of Education, on the basis of AESM's proposals. For current exams no external examiners are required.	The external examiner is required to be present in the student assessment activity for greater objectivity of their assessment.	In UoG, the "Externality" phenomenon is practiced - an external teacher (another university) is assigned to each course to evaluate the assessment method and the results provided by the student's internal teacher. Also in this process, the external teacher will give his colleague suggestions for improvement.
Criterion 9. *Employability of graduates*	In AESM, the Bachelor's degree theses is developed on the basis of the enterprises where the students have performed their internships.	At Aalborg University projects are developed based on real companies, with real problems.	In the UoG, the one-year internship is welcomed and stimulated, with the interruption of the study process. Several initiatives are developed, which aim to contribute to a better employment of graduates.

4.3 EMERGING PATTERNS

Table 7. Data reduction table

	Common patterns	Peculiarities
L1: System level		
Criterion 1. *Acreditation of study programmes*	Accreditation of study programmes is required. There are methodologies, procedures, well-defined evaluation indicators.	Different names of the bodies responsible. The methodologies used and the indicator system largely reflect the specificity of the country and the higher education system concerned.

Criterion 2. *National quality assurance system*	1. There are national bodies to monitor and, implicitly, ensure and improve the quality of university studies. 2. Quality assurance is part of the accreditation process of teaching and research, in order to substantiate research resources. 3. One of the criteria imposed by the Ministry is the continuous assurance of the internal quality of the study programme.	In Denmark and the Republic of Moldova accreditation agencies are also in charge of quality assurance issues. In the UK, the Independent Quality Assurance Body is the Quality Assurance Agency in Higher Education (QAA).
Criterion 3. *Professional bodies involved in accreditation*	There is no obligation in any of the universities to involve professional bodies in the accreditation of study programmes. At the same time, employers are indirectly involved in quality evaluation.	In Denmark, within the university there are advisory bodies at the level of each Study Board, composed of competent and notorious external persons..
L2. University management level		
Criterion 1. *University governance, management and organization bodies*	There is a Governance and Management system	*Denmark:* The university Board and the Rector. It is a unitary management structure. *United Kingdom:* Governing Bodies: Council, Vice-Rector, Academic Committee, Secretary, Student Organizations. *Republic of Moldova:* Senate, the Council for Institutional and Strategic Development, the Scientific Council, the Faculty Council, the Administration Council, and the Rector

Criterion 2. *Institutional strategy of the university, incorporating the curriculum strategy with a focus on student-centered learning*	In all universities there are institutional strategies. In all institutional strategies emphasis is placed on student-centered learning.	In *Aalborg University* there is an institutional commitment to learning and innovative teaching that is laid down in the 2016-2021 university strategy, focusing in particular on problem-based learning and student employability. The *UoG's Strategic Plan* (2012-2017) provides for the development of student-centered education. In the AESM Charter, Chapter VII "Promoting student-centered education" is dedicated to this topic. AESM's STRATEGIC DEVELOPMENT PLAN for the period 2012-2017 mentions the need to promote student-centered teaching methods.
Criterion 3. *Quality assurance bodies at university level*	In each university there are bodies established to ensure a high level of teaching and research activity.	*At Aalborg University* there is a Group responsible for quality assurance and development. *In the UoG,* supervision of all quality assurance procedures is within the competence of the Academic Council The Quality Council is established at *AESM's* Senate level
Criterion 4. *Pedagogical training of teaching staff and their continuous training*	There are requirements at each university level to prove formal pedagogical training. There is a need, but also lifelong learning conditions.	*At Aalborg University* of a Learning Lab is created, the PBL Academy; *At UoG* there is the Continuous Training Department; *At AESM*, the DSDCMC is responsible for the teacher training and development of teachers' pedagogical competences..
L3. Faculty / department level		
Criterion 1. *The role of the faculty in the communication with stakeholders with regard to*	Faculties and chairs / departments are part of the internal organization of the university, where meetings are organized to	

student-centered teaching and learning	share examples of good practice and performance in student-centered teaching and learning.	
L4. Level of the Council of Studies		
Criterion 1. *Structure of the body responsible for studies*	There is a Council of Studies in each of the universities, but the role of this body is different. Different is also the level at which it is established.	*In Aalborg*, the Study Board manages one or more study programmes and is instituted and abolished by the Dean of the faculty. *In the UoG* there is a body responsible for organizing studies at the faculty level. *In AESM* there is a body established at the institutional level responsible for organizing the study process.
Criterion 2. *Analysis of the evaluation practice*	Each university has a rich experience in using different ways of evaluating students.	
Criterion 3. *The way to develop a new study programme*	There are clear provisions for how to develop a new study programme.	The initiative to develop a new study programme at Aalborg University can come from a teacher, while in the UoG and AESM, the initiator can be the department (the chair). There are differences described above regarding the process of developing and approving a new study programme.
Criterion 4. *Involvement of students in the development of study programmes*	In all universities, students are directly or indirectly involved in developing the study programme.	There are clear provisions in Aalborg University regarding the participation of students in the Study Board, responsible for the development of the study programme. In AESM and UoG, students' involvement is indirect through their participation in the bodies that then analyze and approve these plans, but also through various questionnaires the students take part in.

Criterion 5. *Periodic monitoring and analysis of study programmes*	It is the focus of attention in all the universities studied.	At Aalborg University they are analyzed every semester, in AESM and UoG - annually.
L5. Integration of disadvantaged groups of students		
Criterion 1. *The existence of a body dealing with students with disabilities*		There is a specialized body – HelpZone - in the UoG. In EASM and Aalborg University at the institutional level and at the faculty level their record is kept to determine the individual support and assistance measures that can be offered.
Criterion 2. *Ways of working with disadvantaged students in relation to teaching*	All conditions are created so that they are not marginalized.	The HelpZone office in the UoG also provides assistance to disadvantaged people with regard to teaching-learning-evaluation. In AESM, counseling is provided by group supervisors.
L6. Infrastructure (physical environment)		
Criterion 1. *Ensuring facilities tailored to the needs of people with disabilities*	Universities have infrastructure that provides access to studies and offers learning opportunities for students with disabilities	
Criterion 2. *Existing facilities for students to support problem-based learning*	Universities are well equipped with study halls, computers, well-arranged campuses, libraries, WI-FI connection, and so on.	
L7. Study programme level (Business and Administration)		
Criterion 1. *Structure of the Business and Administration study programme*	All the study programmes analyzed assume a period of studies of 3 years, 6 semesters.	In UoG, it is possible (welcomed) to interrupt studies over a year in favor of the internship. The internship period as a compulsory component of the study programme exists only in AESM.
Criterion 2. *Student's workload*	The workload of the student is measured in transferable study credits and consists of work with the teacher in the auditorium (direct contact) and individual work of the student.	In Aalborg University and AESM, the workload is measured in ECTS (30 per semester and 60 per year respectively), and in UoG in CAT (60 per semester and 120 per year). 1 ECTS in Denmark = 27 student working hours

		1 ECTS in the Republic of Moldova = 30 hours 1 CAT = 10 hours
Criterion 3. *Student assessment*	Universities use a wide range of examinations. Continuous examination is practiced throughout the semester. Typically, the study programme indicates the evaluation methods.	In Aalborg University, a specificity of the examination is determined by the large share of team work. Different examinations for people with disabilities are conducted in the UoG. In AESM there is a calculation formula for determining the final grade for the discipline.
Criterion 4. *Involvement of teaching staff, students, graduates, employers in the design, management and improvement of the study programme*	In all universities, different actors, students, teachers, employers, graduates, participate in the elaboration and improvement of the study programmes.	In the AAU, teachers and students participate in an equal number in drafting the study programme. In the other universities, the actors involved, to a large extent participate indirectly in the design, management and improvement of the study programme.
Criterion 5. *Avoiding and punishing cheating and plagiarism*	In all universities, plagiarism and cheating are not tolerated. Different ways of preventing and fighting this scourge are used.	At *Aalborg University* there is a special VBN portal that tests all the projects, the bachelor's and master's degree theses against plagiarism. *Gloucestershire University* has been using the Turnitin plagiarism detection software since autumn 2015. In *AESM*, each graduate is required to submit the thesis, in electronic format, in the AESM's Repository (anti-plagiarism system) for the verification of the degree of plagiarism.
Criterion 6. *Student appeals*	Students have the right to challenge evaluation grades. There are elaborated Regulations, which in detail explain how, when, under what conditions, the grades can be challenged.	
Criterion 7. *The current grading system*	There is a transparent grading system in each university, which allows to know in advance what is	In Denmark, a grading system based on 7 scales, consisting of five positive grades 0, 2, 4, 7, 10,

	the appreciation granted for and for which level of knowledge.	12 and two negative grades 00 and -3, is used. In the UK, the grading system is expressed in percentage and in letters. Thus, 70-100% equals to A, 60-69% - B; 50-59% - C; 40-49% - D. These are the promotion grades. Those below 40% are not promotion grades. Assessment of knowledge in the Republic of Moldova is appreciated with grades from 10 to 1. Grades from ”5” to ”10”, obtained as a result of the evaluation, allow obtaining the credits allocated to them according to the educational plan.
Criterion 8. *Role of the external examiner*	The external examiner has the same role in assessing the students in the analyzed universities, only that it manifests itself differently.	In the AAU and UoG for every current exam, people from outside are invited to allow more objective evaluation of student learning outcomes. In AESM, the external examiner is only present at the completion of the studies.
Criterion 9. *Employability of graduates*	Study programmes are committed to employability.	

5 BUSINESS AND ADMINISTRATION PILOT STUDY PROGRAMME, 1ST CYCLE, BACHELOR'S DEGREE STUDIES

5.1 INTRODUCTION

Historically speaking, most of the Moldovan universities have focused over a rather long period mainly on teaching and learning. We can say that universities, which have carried out visible research activities at national or international level, are currently missing.

In universities, the classical system of focusing on teacher activities prevails, which we consider surpassed, at least taking into account the fact that it was designed to integrate graduates into a stable and inflexible labor market to the changing society, especially in relation to international influences. However, considering the speed with which changes are being made today, the flexibility of the labor market, it is clear that a student-centered education offers more benefits to society, offers the possibility of training specialists who would have the skills that employers require. The change from teacher-centered to student-centered education involves a cultural transformation, and thus behavioral and attitude changes, both on the part of the students and the teachers, as well as the institution in general. Non-involvement of one of these factors makes it impossible to implement this method.

Following the study of student-centered teaching methods in several universities across the European Union, we aim to introduce these methods into the Business and Administration study programme at AESM. We will focus on the gradual implementation of problem-based education (PBL) within this pilot study programme.

5.2 STUDY PROGRAMME OUTLINE

Studying the active teaching methods at Aalborg University, Denmark, and Gloucester University in the UK allowed us to conclude that each of these universities uses different methods, but all of them have a focus on the student. All methods involve the learner in his or her own learning activity, which allows him / her to be more prepared for potential employment, where problems occurring daily can not be introduced into a certain framework with ready-made solutions, but requires engagement, knowledge, creativity and logical thinking. These qualities are important for graduates to have.

We also noted that in every country there are certain peculiarities, which derive from the legislative and normative system existing in the country, from the customs, rooted in the past ten or even hundred years, of the mentality of the population. It is important that, by studying the experience and wishing to take it over, we do not forget to look at the environment in which this experience is to be implemented. *Unconditional experience import can not have positive results.*

Studying in this Report the current situation in the field in the Republic of Moldova in general and in the Academy of Economic Studies of Moldova in particular allows us to come up with this outline of the Business and Administration pilot study programme. We hope to implement this plan over the next 5 years.

The general objective of the study programme is to train multi-skilled professionals, potential managers and entrepreneurs to help create a new status for the businessman, in general, and the entrepreneur in particular, as the main actors of the competitive economic system. The theoretical and applied skills offered by the study programme will facilitate the integration of future graduates into the labor market.

The objectives of the Bachelor's degree programme can be summarized as follows:

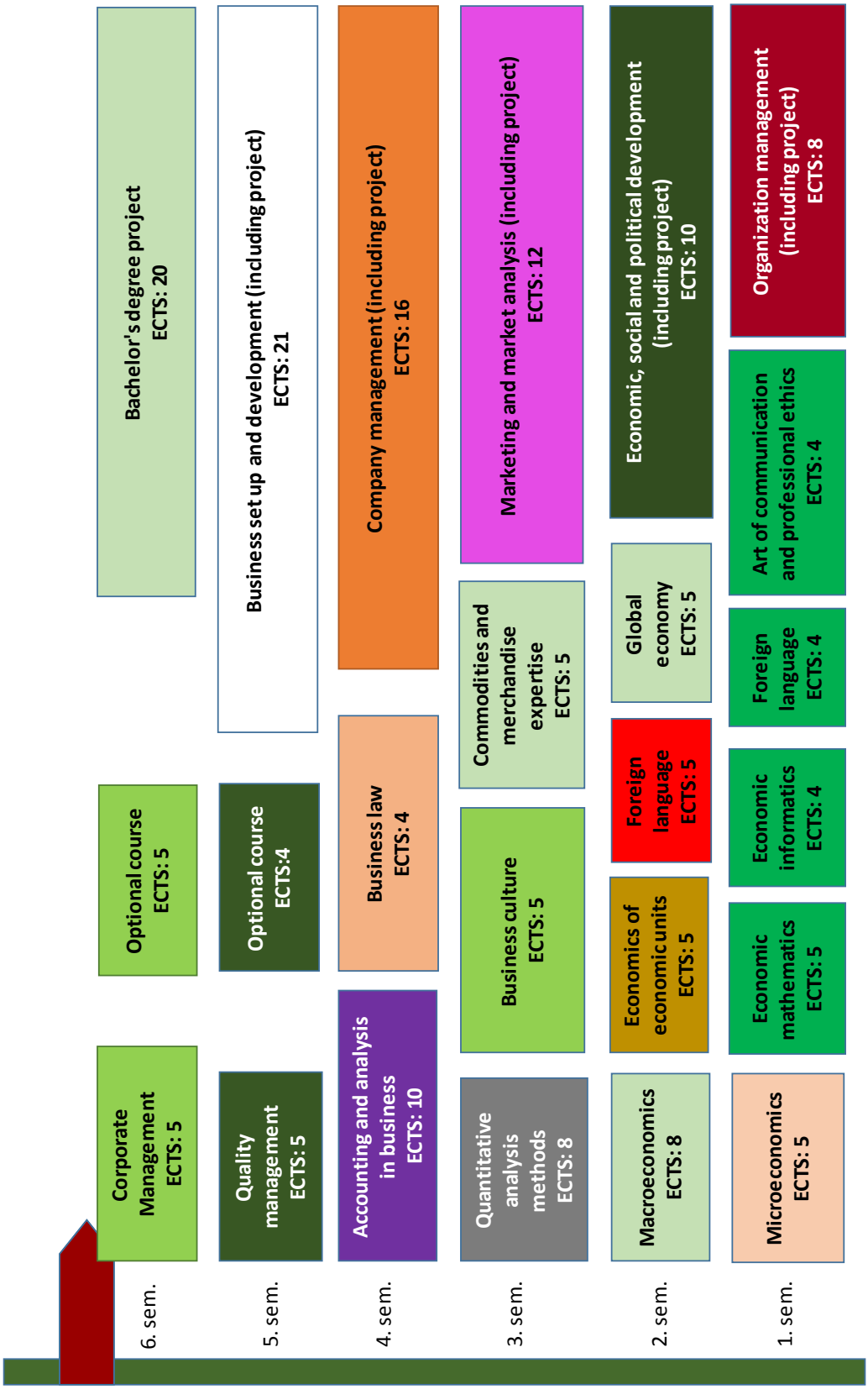
- ✓ Training of specialists in business management through Bachelor's degree studies;
- ✓ Creating competences in the field of business by organizing courses at specialized disciplines such as Finance, Accounting, Marketing, Management, etc.;
- ✓ Using student-centered teaching methods, including problem-based learning;
- ✓ Providing the opportunity to study business through a holistic approach in different contexts and from different perspectives;
- ✓ Preparing students for the challenges of the 21st century management;
- ✓ Promoting employment opportunities by involving students in finding and solving a variety of authentic business problems;
- ✓ Preparing students for further master's degree studies or others.

Learning objectives:

- ✓ Knowledge of business management functions and how business and management integrate with each other;
- ✓ Understanding the complexity, changing nature, ambiguity and other business challenges;
- ✓ Knowledge of contemporary issues in business management, including sustainability, globalization, corporate social responsibility, diversity and governance.
- ✓ Ability to work effectively both individually and in team with others;

The structure of the educational plan for the Business and Administration pilot study programme is presented in Figure 3.

Figure 3. Outline of the educational plan of the Business and Administration pilot study programme



5.3 DESCRIPTION OF THE STUDY PROGRAMME

The Business and Administration pilot study programme lasts 6 semesters or 3 years of study. In each semester, students will be able to accumulate 30 study credits so at the end of the period they will get 180 ECTS. In each semester students will have both theoretical and practical courses where they will work in teams or individually in different projects.

We will analyze each semester individually:

Semester I

	Module	ECTS	Form of assessment
1.	**Management of the organization**	**8**	**E+P**
2.	Microeconomics	5	E
3.	Economic mathematics	5	E
4.	Economic informatics	4	E
5.	Foreign business language	4	E
6.	Art of communication and professional ethics	4	E
TOTAL		**30**	

In the first semester students will be able to accumulate the general and humanistic orientation component by attending economic mathematics, economics, business language, art of communication. We also think that these courses are important to students not only to comply with certain provisions of the Framework Plan (which we can not ignore), but also from the point of view of future specialized courses they will attend or to solve certain problems in the case of the development of certain projects.

Microeconomics is a fundamental course that allows students to get a good initiation into the economic science.

Management of the organization is a specialized course that will allow the initiation into the chosen specialty through the knowledge gained during the course, but also the development of the skills to work in a team, to highlight certain problems in the science of business management and to look, at an early stage, for certain solutions.

Semester II

	Module	ECTS	Form of assessment
7.	Macroeconomics	5	E
8.	Economics of economic units	5	E
9.	Foreign business language	5	E
10.	World economy and European integration	5	E
11.	**Economic, social and political development**	**10**	**E + P**
	TOTAL	**30**	

Semester II contains modules of courses that enable students to advance in their knowledge of economic sciences (macroeconomics, economics of economic units), to gain experience in project development. The project in the second semester has a general character, does not refer directly to the specialty, but it contributes to the development of skills of critical thinking, analysis, synthesis, drawing conclusions based on the analyzed materials.

Semester III

	Module	ECTS	Form of assessment
12.	Quantitative analysis methods	8	E
13.	**Marketing and market analysis**	**12**	**E + P**
14.	Business culture	5	E
15.	Commodities and consumer goods expertise	5	E
	TOTAL	**30**	

In the third semester, the volume of work done by students in the project-based teams continues to grow. We considered that the knowledge that students would gain at this stage, along with the courses they attend in parallel, will allow them to conduct research on marketing and market analysis.

Semester IV

	Module	ECTS	Form of assessment
16.	Accounting and business analysis	10	E
17.	**Company management**	**16**	**E + P**
18.	Business law	4	E
	TOTAL	**30**	

In the fourth semester students will develop a complex business management project based on the knowledge and skills they have gained over the course. The project will allow analysis of all aspects of the company's activity, highlighting certain problems in its activity, looking for solutions. The company may be a real (preferentially) or a virtual one.

Semester V

	Module	ECTS	Form of assessment
19.	**Business set up and development**	**21**	**E+P**
20.	Quality management	5	E
21.	Optional course	4	E
	TOTAL	**30**	

In semester V students will have to develop a complex study that includes activities starting from the set up of the business (identifying the business idea, choosing the organizational form, developing the business, etc.). It is welcomed to undertake an internship at the company on which the research will be conducted. Also, several optional courses will be proposed from which the student will choose one.

Semester VI

	Module	ECTS	Form of assessment
22.	Corporate management	4	E
23.	Optional course	4	E
24.	**Bachelor's degree project**	**22**	**E + P**
	TOTAL	**30**	

Semester VI is the last semester of the Bachelor's degree study cycle. The Bachelor's degree project can be developed in a team of 2-3 persons or can be developed individually. The drafting of the Bachelor's degree project is obligatorily accompanied by an internship within the organization. The theme of the project is very wide, which will allow the graduates to select the subject of the research, according to their wishes. The development of the Bachelor's degree project finishes with its public defence within a Committee. The Chairman of this Committee will necessarily be a person outside the AESM, preferably a person who is part of the top management of an organization.

Thus, undertaking the studies during the 6 semesters, according to the present plan, implies the accumulation of 91 study credits, following the attendance of theoretical courses, and the accumulation of 89 study credits, as a result of the realization and defence of the projects elaborated in the team. So the implementation of this pilot study programme will, in theory, allow us to reach the 50:50 ratio of lectures and teamwork. We are aware that even reaching this ratio this will not place us on the same level of the use and implementation of PBL, along with Aalborg University, where this model was initiated in 1972, and the experience currently used has been accumulated over the course of 45 years.

For each module included in the educational plan, a curriculum will be developed, specifying the number of hours, including direct contact and individual work, objectives, learning outcomes, module content, course structure, evaluation method, etc.

Students have all the necessary conditions to learn individually or to work in teams with their colleagues. There are enough study rooms endowed with the necessary equipment. Across the campus there is WI-FI connection. The AESM's scientific library is the richest in the Republic of Moldova in the economic books of the scholars from the country and abroad. The Library is also subscribed to a large number of databases to which students have access.

The most important but also vulnerable resource is the human resource, i.e. the teaching staff who will develop the content of the modules and who will work directly with the students. In this respect, we mention that AESM employs 375 full-time teaching staff and 53 part-time employees. 61% of full-time teaching staff in AESM hold the scientific title of doctor or doctor habilitate of science.

Under the project, 15 people, including 12 people up to now, have been trained or will benefit from academic mobility. Between 26 December and 30 December 2016, another 23 persons were trained in the **Problem-based learning - PBL** training, organized by the Ph.D. in Pedagogical Sciences, Sergiu Baciu, Director of DSDCMC, a member of the project team.

People who will be work in the pilot study programme will be selected from among existing ones. Other trainings related to problem-based learning or other active learning methods for students will also be organized during the next period.

Having the plan mentioned as an implementation goal in the coming years, starting from the same objectives stated above, but also taking into account the impossibility of major derogations from the existing normative acts, for the students admitted to studies in 2017-2018 in the pilot groups, we propose the following educational plan, divided into semesters:

Year I of studies, semester I

	Course / module	ECTS	Form of assessment
1.	Microeconomics	5	E
2.	Economic mathematics	5	E
3.	Economic informatics	5	E
4.	History of economic thought	5	E
5.	**Art of communication and professional ethics (+ project)**	**5**	**E**
6.	Foreign business language I (English)	5	E
7.	Physical education I	-	V
	TOTAL	**30**	

In the first semester, students' involvement in PBL will take place in the course of *Art of Communication and Professional Ethics.* The project will be evaluated with a garde, but it will not present a separate evaluation, it will form a part of the final grade in the chapter „Student's individual work".

For the second semester, we plan the following:

Year I of studies, semester II

	Course / module	ECTS	Form of assessment
8.	Macroeconomics	**5**	**E**
9.	**Economy and management of the organization (+project)**	**10**	**2E**
10.	Statistics	**5**	**E**
11.	World economy and European integration	**5**	**E**
12.	Foreign business language II (English)	**5**	**E**
13.	Physical education II	**-**	**V**
	TOTAL	**30**	

In the second semester we introduce the *Economy and management of the organization* module, in which a team project will be developed. It's an interdepartment module.

For the third semester we planned the following modules:

Year II of studies, semester III

	Course / module	ECTS	Form of assessment
14.	Econometrics	5	E
15.	**Business set up and development (+project)**	**8**	**2E**
16.	General and business to business marketing	5	E
17.	Basis of accounting	4	E
18.	Commodities and consumer goods expertise	4	E
19.	Social and economic philosophy / Political science	4	E
	TOTAL	**30**	

In this semester, the *Business set up and development* module will be the one in which the PBL project will be developed.

Year II of studies, semester IV

	Course / module	ECTS	Form of assessment
20.	**Operations management / Annual project**	**16**	**4E**
21.	Business law	4	E
22.	Business accounting	3	E
23.	Business financing	4	E
24.	Tourism economy / International tourism	3	E
	TOTAL	**30**	

In the fourth semester we created a complex *Operations management* module, which also includes an annual project, a team project that will be evaluated separately with a grade. Under this module, students will conduct an internship within companies, preferably production ones. The problems that will be debated in the projects will be determined by the students during the mentioned internship. The analysis, which will be carried out, based on concrete situations, identified by the students, will help in the elaboration of the bachelor's degree thesis.

Year III of studies, semester V

	Course / module	ECTS	Form of assessment
25.	**Company management (+project)**	**14**	**3E**
26.	Human resources management	**4**	**E**
27.	Marketing researches	**4**	**E**
28.	Service management / Supply and sales management / Management information systems	**4**	**E**
29.	Logistics / Sales techniques	**4**	**E**
	TOTAL	**30**	

In semester V students will have to identify and solve some business problems within the *Company management* module, by developing a team project.

Year III of studies, semester VI

	Course / module	ECTS	Form of assessment
30.	Corporate management	**4**	**E**
31.	**Bachelor's degree internship and development of the Bachelor's degree thesis**	**22**	**E**
32.	Comparative management / Innovative management	**4**	**E**
	Bachelor's degree exam *(elaboration and defence of the bachelor's degree thesis)*	**10** *(included in p. 31)*	
	TOTAL semester	**30**	
	TOTAL per years	**180**	

In the last semester, students will develop the bachelor's degree thesis, having the option of working individually or in a team. We aim for students to identify problems in companies themselves when doing their Bachelor's degree internship.

Thus, in this variant, which is less revolutionary, we have taken into consideration and respected the provisions of the normative acts in the field: we have maintained the Physical Education course, not allocating it credits, we have left 2 internships: production internship (semester IV) and Bachelor's degree internship (semester VI), elaboration of a project with a separate grade, etc.

6 ROADMAP

6.1 INTRODUCTION

The Roadmap is a consolidated list of measures, commitments and timelines for implementing actions to overcome the challenges identified in the pilot study programme for the implementation of Problem-Based Learning.

Its immediate purpose is to establish an institutional foundation to overcome certain barriers or certain threats to the implementation of the project in question.

As far as the implementation period is concerned, it must be taken into account that some new elements that will be implemented can be included in the existing regulatory framework, while others require some changes in the existing regulatory acts.

6.2 FIT-FOR-PURPOSE

In order to implement the pilot study programme, mentioned in Chapter VI, a Roadmap was developed (Annex 4). This includes several necessary activities to be implemented at the institutional level in order to successfully implement the pilot study programme. The implementation of this Action Plan has already begun, with some activities being carried out, others having to be launched. We could formally divide these activities into several groups:

I. Activities related to the *elaboration* of the educational plan for the students who will study within the pilot study programme. When elaborating the plan, it was taken into account the experience seen and studied in the partner Universities of the European Union, the legislative and normative acts regulating the activity in higher education in the Republic of Moldova. Also, some proposals have been made to amend some of the provisions of the normative acts in force, in order to be able to carry out the activity within the pilot study programme under the regulatory conditions.
II. Activities related to the *training of the teaching staff* with regard to the use of the PBL method. In this respect, some of the teachers who will have classes in the respective groups have participated in several trainings organized within the project at TUM or at AESM during 2016. Also, several teachers will benefit from academic mobility at partner Universities in the European Union, where they will be able to get acquainted with the method in question. Multiple trainings for teachers on problem-based learning, assessment of student activity, etc. will be organized within AESM.
III. Another group of activities refers to the *organization of the Admission 2017*. In this sense, information leaflets on the pilot study programme will be prepared, which will be sent to high school graduates during March-May, when AESM conducts an advertising company in high schools in the country. The information will also be made public on the AESM website. During the admission (July-August 2017), the people who will learn in the respective groups will be selected.
IV. *Elaboration of educational documents:* curricula on disciplines (analytical programmes / syllabi), guidelines, case studies, evaluation etc. (for the first year of study).

V. *Preparing the physical environment* for organizing studies. In this regard, we mentioned that the AESM is equipped with everything necessary, including study halls, literature, access to databases, free WI-FI for students and teachers, etc. Also, from the sources of the project with AESM co-financing, two student study rooms will be prepared for the team work of the students. The AESM library has been completed with books purchased under this project with reference to problem-based learning that everyone can read. Other purchases of books or subscriptions to certain databases will also be made.

VI. Activities related to *the dissemination of good practice.* In this regard, the AESM Economic Courier newspaper, in which we will publish regularly information on the implementation of this project (this is already done) will be used, the members of the project team will participate with communications at various conferences, workshops, will produce scientific articles to be published in scientific journals in the country.

VII. *Extending the project* to other specialties within AESM.

All of these activities will require some resources. The necessary financial resources will be covered by the project (mobility of teaching staff and students, procurement of equipment, etc.), with the support of AESM (organization of trainings with teachers, motivating them, refurbishment works, procurement of equipment, etc.).

6.3 CHANGING THE CONTENT

The Roadmap presented in Annex 4 includes some activities required for implementation of problem-based learning within the Business and Administration pilot study programme. In fact, we can not include all the necessary changes in this action plan. As mentioned above, we started from the idea that we must maximally fall within the existing regulatory framework, which means that starting with September 1, 2017, we could start implementing this programme. At the same time, certain changes have been made, which can not be within the existing normative limits and which would require a favorable opinion from the Ministry of Education of the Republic of Moldova. In the table below, we highlight these moments:

Table 8. Regulatory provisions required to be amended

Article	Provision	Proposals
Framework Plan for Higher Education, art. 9.	For one module, it is recommended to allocate 4-6 study credits.	To exclude the limitation
Framework Plan for Higher Education, art. 9.	In **Cycles I and II**, the course unit / discipline can be accomplished through **class activity** (direct contact): lectures, seminars, laboratory works, practical works, design works, didactic, clinical internships and other forms approved by the Senate; as well as **non-classroom didactic activity**: didactic-artistic or sports activities; *annual, bachelor, master's degree projects / theses*; individual activities, social and community activities, other activities provided by institutional regulations.	To assign to the class didactic activity the supervision of the team activity of the students

Framework Plan for Higher Education, art. 28, e)	A Physical Education course for students of the first / second year, which is not quantified with credits, but whose assessment with the "admitted" grade is a prerequisite for admission to the graduation exam of the Bachelor's degree studies.	To exclude the Physical Education course.
Regulation on the organization of studies based on NSSC, art. 20	For the study programmes of 180 credits, an annual thesis shall be developed in the second year of study. For study programmes of 240 credits, an annual thesis shall be developed in the second and third year of studies.	To exclude the limitation to a single project

At the same time, the changes mentioned in the educational plan existing in the „Business and Administration" specialty also require the adaptation of the theoretical and practical courses to the new requirements. It is necessary to prepare case studies, to prepare some didactic materials, which would allow a better understanding of the essence of PBL use, the role of the teacher, the role of the student, which involves teamwork, the division of responsibilities, how the evaluation takes place, etc.

From the point of view of the necessary resources, we mention that the physical environment existing in EMSA is favorable to the implementation of this method. However, in the year 2017, 2 special rooms will be prepared for the teams to be able to work on the projects. Also, the number of halls, their endowment, the existence of WI-FI throughout the university campus, the rich library, the existence of a mediatheque with access to the database and others have been described in this Report. It is necessary to train the teachers and ensure their continuous improvement in the field of PBL use and to prepare methodological resources.

7 CONCLUDING REMARKS

The competences of the 21st century require the implementation of training that allows students to apply the content of courses, actively participate in learning, use technology, and collaborate.

PBL is a student-centered training model based on research where the student engages with a genuine, poorly structured problem requiring more in-depth research [108]. Students identify the shortcomings in their knowledge, carry out research, and apply what they have learned to develop solutions and present their findings [109]. Through collaboration and research, students can cultivate problem solving [110], metacognitive skills, learning commitment, and intrinsic motivation.

The PBL model is based on *new perspectives in learning:*

1. Knowledge from research (analytical knowledge)
2. Knowledge based on experience (knowledge based on practice)

It is important to ensure the synergy between these two.

3. Creativity: Can be learned
4. The ability to learn increases with the level of knowledge (absorption capacity theory)

In the literature we consulted in the PBL field, we noticed an important risk for using PBL: despite the potential benefits of PBL, many teachers lack confidence or knowledge to use it [111]. So, the main emphasis we need to put on is to adequately train teachers and motivate them to use PBL.

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ANNEXES

Annex 1. Template methodology

Each Task Force Team will store all collected data files in the project intranet https://pblmd-moodle.samf.aau.dk/. Task Force leaders are to make sure all data files and documents are stored in the project intranet.

1. Institutional fit-for-purpose

This part is concerned with exploring the relationship between internal university structures and study programmes, incl., how study programme development and support are integrated throughout the entire university. The cohesion of study programme development and support will be examined at university management, faculty/department, as well as the study board levels. Issues related to the integration of disadvantaged group of students as well as to available physical environment will be explored.

Each Task Force Team will employ this part of the methodology to develop a benchmark understanding of how student-centred teaching and learning at EU partner universities is imbedded into and related to overall institutional structure and later to explore the same relationship, fit-for-purpose at own universities.

NOTE: the questions below are separated into 6 levels; there might be an overlap between the levels. It is important when asking a question to consider its relationship with other levels and impact it might have on other areas within and across the levels.

System level:

- Does the University have power/authority to accredit/validate its own degrees? If so go to section below.
- If not what is the external process?
- What is the legal status of the accrediting body? How is it composed? Does it publish a guide and criteria for accreditation? Is this publicly available? Ask for a copy and include an analysis of key elements in your report.
- Does accreditation happen periodically? Is there a fast track for new degrees/areas of study? How long does the normal process take? Is accreditation institutional or subject based?
- How is it regarded by stakeholders?
- Is there a national system of Quality Assurance? Is it independent of accreditation? What is the legal status of the QA body? How is it composed? Does it publish a code of practice? If so obtain a copy or access and include an analysis of key elements in your report.
- How does the national QA body influence curriculum development and internal quality assurance? How is it regarded by stakeholders?

- Are there national subject benchmarks or equivalent which programmes have to address?[112]
- Are there any relevant guidelines or benchmark statements provided by government agencies which constrain or otherwise affect the delivery of programmes? Explain whether these benchmarks refer to the content, delivery or assessment of the programme.
- Which professional bodies have some input into the validation or oversight of the programmes and how are these processes carried out?
- Which external validating agencies are involved in the design of the programmes and how is this achieved?
- What are the arrangements for dual awards or professional recognition?

University Management Level:

- What is the governance, management and organizational structure of the university?
- Is there a University institutional strategy which incorporates a curriculum strategy with a focus on student centred learning or is there a separate curriculum (learning and teaching)strategy? Is there an institutional commitment to innovative learning and teaching, greater use of ITC, a focus on employability, internationalisation of the curriculum? Language acquisition, inter-cultural skills? Obtain or access the documents and include an analysis in your report?
- What is the key university structure/committee responsible for student-centred teaching and learning? What are its terms of reference? What is its membership?How often does it meet? Are there provisions for fast tracking urgent curriculum development? What delegated powers does it have and to which body is it accountable? Does it produce regulations/good practice guides for curriculum proposals? What is the relationship of this body to Faculties/ Schools/ Departments / Colleges in the University?
- Is there a separate committee and/or office for internal quality assurance and enhancement? What are its responsibilities and how is it resourced(number and level of staff full/part-time, academic or administrative?
- At what level in the University curriculum proposals can be initiated and possibly a definition of the various bodies to be sure that there is a consistent understanding of terms? If necessary, for each university create a Glossary of terms and respective provide definitions.
- What other bodies have an influence on curriculum development and approval e.g. Is there a requirement for a business case for all new programmes? Would the business case have to demonstrate how the proposal fits the University strategic plan? Which committee or senior manager needs to approve the business plan? Would service departments such as e.g. Finance, Estates, Library, Careers, Legal, Ethical expect/require to be consulted?]

[112] In the UK, and probably elsewhere, there are certain guidelines and constraints exercised from outside the HEI. These might be professional bodies (e.g. in the case of Law in England, where any qualifying Law degree has to be validated by the Law Society); government agencies (e.g. the subject benchmark statements provided by HEFCE); or other validating agencies (e.g. EDAMBA etc.). This can be significant because these agencies sometimes dictate the curriculum and the assessment style (e.g. insisting on exams).

- What learning and teaching and assessment approaches are used at the university? What differences are there between and/or within different subject areas/faculties?
- Is there an institutional graduate school? Does it have responsibility for both second and third cyles? What are its terms of reference? How does it relate to other bodies responsible for curriculum approval? [You might want to develop this with more on Doctoral Schools/Programmes]
- What public/published information is available on all aspects of the University curriculum policy and content? Is this available on the web site with open access? The content should be reviewed as part of the benchmarking.
- Do descriptions of programmes and modules contain clear statements of intended learning outcomes?Learning methods, assessment and assessment criteria? Do programme descriptions indicate potential employment routes post-graduation? Who monitors/is responsible for ensuring this?
- Are academic staff required to have a formal 'teaching' qualification? If so what bodies offer/validate the qualification? What formal requirements are there for continuing staff development and training? How is this monitored and assessed? Which body in the University has responsibility for this? Is the University Human resource department engaged in academic staff training and development? What standards are followed in pedagogical training of academics? Are there national common guidelines, pedagogical standards/methodologies to be followed? What training courses are organized for staff teaching skills development?
- How are students represented at the university level? What role do students play in the governance, management, organisation of the University? Note: it is important to understand how the students are appointed/ nominated to the relevant bodies and how they report back to their constituency.
- What KPIs are typically used at university level in relation to resourcing teaching and learning (such as, SSRs (staff student ratio); spend per student on library resources; time allowances for teaching and assessment; average class size etc)?
- What is the role of the students' union in the student-centred teaching and learning?
- How is student-centred teaching and learning supported by the university's mission statement?
- How, if at all, is student-centred teaching and learning promoted throughout the university?
- What is the role of continuous professional development (CPD) in supporting student-centred teaching and learning?
- What financial or administrative support is provided at university level to support student-centred teaching and learning approaches? These might include funding for pedagogic research, curricular development projects etc. and might be provided through central funds or through specific research units with budgetary autonomy.
- What is the overall leadership structure at university level for academic programmes including teaching, learning and assessment?

Faculty/department level:

- What are the communication structures and relationships between the higher management level at the university and the level of facultyand/or department related to student-centred teaching and learning?
- What is the role of faculty and/or department in the new study programme development?
- How do faculty share and access examples of good practice within departments?

Study board level:

- What is the structure and relationship of a Board of Studies (or other level) with the department, faculty and research centres within department?
- Is there a procedure for inter-disciplinary or multi-disciplinary programmes? Does this require the establishment of unique committees/boards and how do these relate to the overall structure? Are there problems in establishing such degrees? What are the problems?
- In depth review of assessment practice: the use of innovative methods of assessment e.g. peer assessment, the role of formative and summative assessment, types of assessment, blind and double marking, monitoring of assessment to ensure that it is effective in relation to the achievement of learning outcomes, mark distribution analysis both within a subject and between other subjects (i.e. across the University) to ensure equity and comparability, use of external examiners, marking systems with a clear definition of criteria (Note: the integration of assessment into the process of student centred learning and its relationship with learning outcomes is critical).
- What is the process for (a) the approval of a new degree programme – is there any difference between first cycle, second cycle and third cycle? (b) the approval of a new module in an existing degree? What level of change, enhancement in a degree programme or a module requires full institutional approval? How long does the process take for each of these? Note: Understanding the approval cycle is important.
- What role do students play in curriculum planning and development? Is there a difference in their role between the cycles? Note: it is important to understand how the students are appointed/nominated to relevant bodies and how they report back to their constituency.
- What procedures(if different from above) exist for developing new study programmes?
- How is e-learningimplemented and to what extent is it embedded within the programmes?
- How are staff members involved in managing and coordinating a particular study programme (programme coordinators, semester coordinators, supervisors)? How is this formalized?
- What is the process for annual monitoring and periodic review of programmes?
- Are there any performance indicators?
- What is the process for student feedback? How is this managed and what impact does it have? Does it result in feedback on outcomes to the students?

Integrating disadvantaged groups of students:

- Does the University have an office/staff dedicated for students with a disability? What are the responsibilities and resources of the office?
- What special arrangements are made for students with a disability (incl., according to UN Convention on the Rights of Persons with Disabilities)?
- What are the capacities of the university to work with studentsfrom disadvantaged backgrounds with regard to teaching approaches?
- What special approaches exist that are targeted at socially disadvantaged students?
- What approaches are followed for inclusion of students from non-academic backgrounds, if any?
- What academic support is available to students with learning disabilities?

Physical environment:

- Is the physical environment suitable/adapted for students with a physical disability? Is there a programme of adaptation for students with a physical disability?
- What student facilities exist that support student-centred teaching and learning: study group rooms, common rooms for students, extended university library opening hours, free wifi on campus, IT assistance for students

2. Study programme fit-for-purpose

This part is concerned with exploring a current study programme structure at each EU-partner Universitywith the focus on operational, functional details, normative and technical details.The level of analysis is a particular study programme.

Each Task Force Team will employ this part of the methodology to develop a benchmark understanding of structures, procedures and process related to the development and management of study programmes in EU partner universities as well as explore the same at their own university in respective pilot study programme.

Study programme level:

- To what extent does it reflect the institutional strategy? [See also above]
- To what extent does it reflect subject benchmark statements of the equivalent?
- Is it competence based?
- Does it focus on 'employability'?
- Is it subject to professional or regulatory accreditation (particularly important for Medicine but probably the case for other subjects)
- Does it emphasise innovation, research led learning, entrepreneurship, internationalisation?
- To what extent does it use IT and/or blended learning?
- What is the structure of the chosen programme? (workload, semesters, modules, student evaluations, staff evaluations, learning progression). It would be useful to determine whether this process applies to second cycle as well?
- How is the programme developed, enhanced and managed? What role do students play in the process? What role do employers play? Are other stakeholders consulted/engaged?

- Are former graduates/alumni consulted/engaged?
- What are the functions of the project coordinator, semester coordinator, teaching staff at the programme?
- What supporting documents exist in relation to the study programme? (course description, study regulations, guidelines, learning outcomes, evaluation guides). Are these publicly available?
- What are the existing programme regulations and who is responsible for ensuring that they are followed?
- How are the programme structure and content monitored, reviewed, enhanced and implemented?
- How is staff workload calculated and monitored? How is the norm for allocation of hours (academic staff related) for various types of activities (teaching, supervision, evaluation) calculated (ECTS, formula, or historical)?
- How is student workload calculated and monitored and how does this help to shape curriculum planning and development?
- What are the expected learning outcomes? How are the learning outcomes reflected in the assessments? How are the learning outcomes communicated to the students and how are they assessed?
- How is the student evaluation/assessment conducted? What forms of evaluation are practiced? (Written exams/open questions, multiple choice tests, oral exams, project presentations. Are there innovative forms of assessment e.g. peer assessment, IT based?)
- What are the progression requirements?
- What measures are taken to avoid and sanction 'cheating' and plagiarism? How are these recorded and evaluated?
- What are provisions for student appeals?
- What is the existing system of grading? What are the arrangements for credit transfer and accreditation of prior learning?
- What is the role of the external examiner?
- How is student-mobility embedded in the programme structure and how it is facilitated?
- How is the stuff evaluation/feedback conducted by the students? How are the outcomes of feedback managed?
- What are the academic requirements for students to enter the programme?
- How do students contribute to the curriculum development?
- How are the programmes supported by administrators and what responsibilities do administrators have in directly supporting students? (e.g., answering enquiries; administration of assessments; managing academics' diaries etc.).
- Is the employment of graduates monitored? If so how and over what period?
- Which software, e-learning (e.g. Moodle, MOOC's, Knowledge Apps, moderated forums), how it is used, what checks there are for plagiarism.

Annex 2. Data collection at the Academy of Economic Studies of Moldova

Data reporting table - Academy of Economic Studies of Moldova

Question / Problem	Source consulted	Findings	Reflections
L1: **System level** Acreditation of study programmes	The Education Code of the Republic of Moldova, no. 152 of July 17, 2014 Methodology of external quality evaluation for provisional authorization and accreditation of study programmes and of vocational education and training, higher education and continuous education institutions, GD no. 616 of May 18, 2016 Regulation on the organization and operation of the National Agency for Quality Assurance in Professional Education, GD no. 191 of 22 April 2015 Guidelines on external evaluation of Bachelor's degree study programmes, higher education	According to the Education Code of the Republic of Moldova, all higher education institutions are subject to external quality evaluation every 5 years, based on the methodology and criteria developed by the National Agency for Quality Assurance in Professional Education (ANACIP) and approved by the Government. ANACIP is responsible for ensuring an integrated, credible, objective and transparent system of external evaluation and accreditation of institutions and study programmes. Accreditation can be done by ANACIP or another external quality assurance agency registered in the European Quality Assurance Register for Higher Education (EQAR)	It is useful to analyze the academic accreditation process more thoroughly and in detail
National quality assurance system	Guidelines on external evaluation of higher education institutions Standards and Guidelines (ESG), revised at the Yerevan Ministerial Conference on May 14-15, 2015 Recommendation of the European Parliament and of the Council of 23 April 2008 on the establishment of the European Qualifications Framework for lifelong learning www.anacip.md - the website of the National Agency for Quality Assurance in Professional Education (ANACIP) www.edu.gov.md - Ministry of Education's website		

L2: **University management level** *Institutional strategy of the university, incorporating the curriculum strategy with a focus on student-centered learning*	Strategic Development Plan of the Academy of Economic Studies of Moldova for 2012-2017, PP.8-9, available at http://ase.md/files/documente/reglamente/interne/1.2_plan_strategic.pdf	The quality of studies and the training of graduates for future employment is a priority objective for AESM. In this respect, the use of student-centered teaching methods is encouraged. In the AESM Charter, Chapter VII „Promoting student-centered education" is dedicated to this topic. In the AESM's STRATEGIC DEVELOPMENT PLAN for the period 2012-2017 there is mentioned: „Promoting flexible and innovative teaching methods, an effective means of ensuring this by capitalizing on the opportunities offered by information and communication technologies, including to support personalized and interactive learning, distance learning, virtual mobility, etc., and the strengthening of the knowledge transfer infrastructure is necessary for this purpose"	
Quality assurance bodies at university level	The concept of quality assurance system in AESM, available at http://ase.md/files/documente/reglamente/interne/1.3_conceptul_calitatii.pdf	In order to coordinate the quality assurance in AESM at the level of the Senate, the Quality Council is established, which has an advisory role in substantiating the decisions regarding AESM's quality policy and objectives. The Council is composed of seven members and is coordinated by the Rector of AESM, as chairman. The members of the Quality Council are valuable personalities who have been noted for professional performance. The Quality Council also includes students with very good learning outcomes. In order to implement the quality policy and objectives in AESM, there is the Department of Studies, Curricular Development and Quality	

		Management of AESM headed by a director.	
L3: **Faculty / Department level** *The role of the faculty in the communication with stakeholders with regard to student-centered teaching and learning*	**Statute of the Public Institution Academy of Economic Studies of Moldova**, DS no. 03 of 24 December 2012 **Framework Plan for higher education (cycle I – Bachelor's degree studies, cycle II – Master's degree studies, integrated studies, cycle III – Doctoral degree studies)**, implemented by Order of the Ministry of Education of the Republic of Moldova no. 1045 of October 29, 2015 **The concept of quality assurance system in AESM**, DS no. 4 of 31 October 2007, art. 5.3 **Regulation on the operation of the methodical-scientific council of AESM and the methodological committee of the faculty**, DS no.4 of 27 October 2010	Faculties and chairs / departments are important components of the AESM's internal structure. The initiative to create a new study programme, as a rule, comes from teacher or group of people who forms the programme team. The initiator of a new study programme (any academic or interested group within the faculty / department). The head of of the chair / department appoints a working group that established disciplines in the educational and the list of teachers competent in the field to be discussed in the faculty council. After programme endorsement at the faculty council, the programme documents are submitted for approval to the Senate and the Institutional and Strategic Development Council.	
L4: **Level of the Council of Studies** *Structure of the body responsible for studies* *Analysis of the evaluation practice*	**Regulation on the operation of the Department of Studies, Curricular Development and Quality Management**; DS of 29.06.2016 **Regulation on the assessment of students' learning activity,** DS 6 of 14 March 2012	The body responsible for organizing the studies is AESM is the Department of Studies, Curriculum Development and Quality Management, which works with chairs / departments to develop educational plans, syllabi of the disciplines. The assessment has a continuous character and includes the current assessment (during the practical classes), the evaluation through test	

The way to develop a new study programme	**The Education Code of the Republic of Moldova. Code no.152 of 17.07.2014**, published in the Official Gazette no.319-324 of 24.10.2014	(2 times per semester), the final evaluation (at the end of the course, during the session). Examination is done in writing, orally or computer-aided. There can be test with variants for the answer, case scenarios, tests etc. For Cycle I, Bachelor's degree studies, it is very complicated. At the chair / department level, a working team is formed, who develops the educational plan, arguing the need to initiate such a study programme. Internally, it must be approved at the meeting of the faculty, faculty council, and Senate. If this study programme exists in the nomenclature of specialties, than it is necessary to obtain provisional authorization from ANACIP. If this study programme is absolutely new, it is necessary to enter this programme into the Nomenclature of Specialties. This is done by Government Decision.	
L5: **Integration of disadvantaged students**	**Regulation on the conditions for filling places with budget financing in AESM, at Cycle I, Bachelor's degree studies**, DS 10 of February 26, 2014	The AESM's strategy provides for the creation of a favorable learning environment for all students. The university does not have a dedicated office for students with disabilities.	
L6: **Infrastructure (physical environment)**	www.ase.md - webpage of the AESM http://lib.ase.md/ - webpage of the Scientific Library of AESM **AESM's informatization strategy for 2010-2015,** DS 4/1 of 24 December 2009	AESM's infrastructure corresponds to the tasks of the university and contributes to the good development of the teaching-learning process.	The study rooms are equipped with technical means for training, there are rooms for team work.
L7: **Study programme level**			

Structure of the study programme	**The educational plan. Specialty: 363.1. Business and administration** http://ase.md/admitere/ciclul-1-licenta.html#facultatea-business-%C5%9Fi-administrarea-afacerilor **National Qualifications Framework: Higher Education .** **Regulation on the development in team of the bachelor's / master's degree thesis**, DS no. 3 of December 24, 2014	The study programme consists of 6 semesters, each semester equals 30 ECTS, one ECTS is equivalent to 30 hours of student work. The ratio between theoretical hours and projects is 48% to 52%. The study programme finishes with the elaboration and defence of the bachelor's degree thesis, which can be developed individually or in a team of 2 or 3 students.	
Student's workload	**Framework Plan for higher education (cycle I – Bachelor's degree studies, cycle II – Master's degree studies, integrated studies, cycle III – Doctoral degree studies)**, implemented by Order of the Ministry of Education of the Republic of Moldova no. 1045 of October 29, 2015 **The educational plan. Specialty: 363.1. Business and administration**	The workload is calculated in transferable credits. 1 ECTS equals 30 hours of work per student.	
Student assessment	**Regulation on the assessment of students' learning activity, DS 6 of 14 March 2012** **Regulation on academic mobility in AESM, DS 4 of 2 March 2016**	Depending on the learning outcomes and skills to be acquired by the student, assessment during the course can be done by: tests, reports, individual papers, portfolios, essays, case studies, annual project, etc. Innovative evaluation forms are also used (evaluation by MOODLE platform). All disciplines included in the Business and Administration study programme are completed with exams, except for Physical Education that completes with the test: verification.	

		During the semester, two sessions of the current assessment (tests) are organized, proportionally distributed during the semester, in which the intermediate status of the student's progress is determined. The test's share is 15% of the final grade. Also in the final grade is included in the individual study with 10%, current success - 20% and final test - 40%.	
Involvement of teaching staff, students, graduates, employers in the design, management and improvement of the study programme	**Framework Plan for higher education (cycle I – Bachelor's degree studies, cycle II – Master's degree studies, integrated studies, cycle III – Doctoral degree studies)**, implemented by Order of the Ministry of Education of the Republic of Moldova no. 1045 of October 29, 2015	Many actors are involved in the elaboration, development and improvement of a study programme: teaching staff, students, employers, graduates.	
Avoiding and punishing cheating and plagiarism	**The Code of Ethics of the Academy of Economic Studies of Moldova, DS no. 7 of 21 February 2007** **Regulation on the prevention of plagiarism among students / master's degree students, DS no. 5 February 27, 2013**	In AESM, each graduate is required to submit the thesis, in electronic format, in the AESM's Repository (anti-plagiarism system) for the verification of the degree of plagiarism. If after the examination of the case by the Jury the fact of plagiarism has been proved, by the clear proof of the plagiarism with the indication of the text copied, including those on the Internet, the thesis is not admitted for the defence.	
Student appeals	**Regulation on the organization of studies in AESM based on the national study credit system,** DS 3 of 23 December 2015 **Regulation on the organization of the Bachelor's degree completion examination in**	Students may challenge the examiner's grade within 24 hours of its announcement.	

	AESM, DS 3 of December 24, 2014 **Regulation on the organization of studies in higher education based on the national study credit system,** Order of the Ministry of Education no. 1046 of October 29, 2015		
The current grading system	**The Education Code of the Republic of Moldova, no. 152 of July 17, 2014** **Regulation on the organization of studies in higher education based on the national study credit system,** Order of the Ministry of Education no. 1046 of October 29, 2015 **Regulation on the organization of studies in AESM based on the national study credit system, DS 3 of 23 December 2015**	The assessment of the learning outcomes is done with grades from „10" to „1". In addition to the national grading system, the grading scale recommended in the European Credit Transfer System (A, B, C, D, E, FX, F) is also used to complememt the diploma supplement and facilitate academic mobility. Equating with the national grading scale is done as follows: A: 9,01–10,0; B: 8,01–9,0; C: 7,01–8,0; D: 6,01–7,0; E: 5,0–6,0; FX: 3,01–4,99; F: 1,0–3,0.	
Role of the external examiner	**Regulation on the organization of the Bachelor's degree completion examination in AESM, DS 3 of December 24, 2014**	External examiners are required in the case of the completion exam of the higher education. They are appointed as Chairmen of the Bachelor's degree Examination Committees by order of the Minister of Education, on the basis of AESM's proposals. The same person may be appointed Chairman of a Bachelor's degree Examination Committee no more than two consecutive years.	
Employability of graduates	**Regulation on the monitoring of the employability and professional path of AESM graduates**, DS no.3 of 2 November 2016	Study programmes are committed to employability. Graduates, employers are consulted when developing study programmes, analytical programmes.	

		In AESM, the Bachelor's degree theses is developed on the basis of the enterprises where the students have performed their internships. AESM has institutional procedures for tracking the employment and professional development of graduates, which are carried out by the Career Guidance Center.	
L8: **Pedagogical training level**	**The Education Code of the Republic of Moldova**. Code no.152 of 17.07.2014, published in the Official Gazette no.319-324 of 24.10.2014	The psycho-pedagogical module of 60 transferable credits is mandatory for graduates of non-pedagogical specialties.	

Annex 3. The pedagogical training course: „Problem-based learning – PBL"

PROBLEM-BASED LEARNING - PBL (40 HOURS)

Trainer: **Baciu Sergiu**, PhD, associate professor, AESM +

The course focuses on the development of a proactive personality and has as a major objective the training of the beneficiaries, in a pleasant and productive educational environment, **the competence to apply PBL to provide a *student-centered, research-based* education and is focused on *training professional competences***.

1. The learning outcomes. In this training offer / course, emphasis is placed on training pedagogical competencies in the beneficiaries, by developing skills and attitudes based on relevant psycho-pedagogical knowledge, with the aim of establishing a *pedagogical performance oriented behaviour*.

Upon completion of the course, the beneficiary will be able to:

1) build PBL-based teaching sequences / scenarios;
2) apply relevant PBL educational technologies (case study, project);
3) develop a curriculum for professional training based on PBL.

The outcomes will be achieved by capitalizing on the content of the course units, but also through the appropriate use of the teaching-learning-evaluation activities.

2. Content. The contents are organized in a trans-disciplinary way, in order to focus in the educational process not on the scientific content, but on solving problems in the professional field. Teaching staff will attend the following modules:

- Module A. Problem-based learning. What is and how PBL can be *applied* in professional education?
- Module B. Designing the curricular offer for professional training. How can we design and organize the taught content to provide a *student-centered, research-based and work-based training*?
- Module C. PBL specific teaching - learning – evaluation methods. How can we use *active learning methods* to create an environment that encourages students to work together and to be self-motivated to solve a problem.

3. Teaching and learning methods. Activities will be focused on learning through discovery. They will be specifically combined for different situation methods and procedures such as: problem-solving, case study, role play, heuristic conversation, debates, brainstorming, investigation, project, multiple-angle exploration, panel discussion, argumentation and counter argumentation, independent academic learning, etc.

4. Evaluation methods. The *participatory evaluation* will be used in the training process.

The final evaluation will be done on the basis of teamwork and oral / written presentation of a method of application (case study, project) of PBL in didactic activity.

Period: 26-30 December 2016. Classes will start at 9.00, room 405 bl. A.

Annex 4. Roadmap for the implementation of the Business and Administration pilot study-programme

	Implementation actions	Responsible person	Implementation deadline	Resources
1.	Assessment of the necessity and opportunity of elaboration / modification of the study programme and initiation of the elaboration process.	Cotelnic A.	December 2015	RF: within the approved budget limits HR: dean, head of the Chair / Department of Management, academic staff
2.	Setting up the Working Group and designating the person responsible for drafting / modifying the study programme	Cotelnic A.	December 2016	HR: Academic staff
3.	Assessing the economic and social sector's expectations regarding the competences to be trained unde the study programme	Cotelnic A.	January - March 2016	Real sector partners
4.	Analysis of similar national, European and international study programmes	Cotelnic A. Gaugaș T. Țîmbaliuc N.	January - June 2016	RF: within the approved budget limits HR: Academic staff
5.	Evaluating the necessary and existing resources	Cotelnic A. Solcan A.	*September 2016*	HR: Academic staff
6.	Developing the study programme. Discussion within the Working Group	Cotelnic A. Solcan A.	September - October 2016	HR: Academic staff
7.	Training of the teaching staff for working within the pilot study programme	Cotelnic A. Baciu S.	Mobility, February 2017	RF: within the approved budget limits HR: External Relations Service, Academic Staff, Partner universities

8.	Adjustment of the educational plan according to the Ministry of Education's response	Cotelnic A.	April 2017	
9.	Approval of the modified plan at the meeting of BAA faculty council and the AESM Senate	Cotelnic A. Solcan A.	April-May 2017	
10.	Adjustment of academic curricula to PBL requirements	The teachers involved Solcan A.	April - June 2017	
11.	Developing professional training approaches according to the PBL educational strategy (application of didactic methods: problem-solving, case study, project, group work, etc.)	The teachers involved	June - August 2017	RF: within the approved budget limits HR: Department of Studies, Curriculum Development and Quality Management; academic staff; AESM's Scientific Library
12.	Campaign to promote the study programme: - production of advertising leaflets; - visits to high schools, - sites: www.ase.md, www.studentie.md etc.	The person responsible for the study programme	February - May 2017	RF: within the approved budget limits HR: Academic staff, the marketing and public relations service of EASM, Students Senate
13.	Experimental elaboration and validation of the pedagogical training programme: **„Problem-based learning – PBL"**	Baciu S.	November 2016 - January 2017	
14.	Preparation of two study rooms for team work	Melnic I., Vice-rector for administration and management issues	July - August 2017	RF: within the approved budget limits HR: Technical Service
15.	Organization of admission. Creation of 2 academic groups who will learn according to the pilot study programme	Cotelnic A.	July-August 2017	RF: within the approved budget limits

				HR: AESM's Admissions Commission
16.	Initiating the pilot study programme	Cotelnic A.	September 1, 2017	
17.	Deployment of the study programme	The person responsible for the study programme; The teachers involved	September 2017 - June 2020	RF: within the approved budget limits HR: Academic staff
18.	Elaboration of educational documents: curricula on subjects (analytical programmes), guidelines, case studies, evaluation etc. (for the years II and III of studies)	The person responsible for the study programme; The teachers involved	September 2017 - June 2018	RF: within the approved budget limits RU: Department of Studies, Curriculum Development and Quality Management; academic staff; AESM's Scientific Library
19.	Implementation of the educational plan for all Business and Administration groups	Cotelnic A. Solcan A.	September 2018	
20.	Developing the necessary documents for the selection of students for mobility	The person responsible for the study programme	October - November 2018	HR: External Relations Service
21.	Student selection for mobility	The person responsible for the study programme	February - March 2018	HR: External Relations Service, BAA Dean's Office
22.	Student mobility	Cotelnic A.	September - December 2018	RF: within the approved budget limits HR: External Relations Service, 30 students Partner universities

23.	Monitoring and improvement of the pilot study programme: undertaking corrective and preventive actions	Cotelnic A. Solcan A. Baciu S.	During the study year 2017-2018	
24.	Extending the pilot study programme to other study programmes	Cotelnic A.	September 2019	RF: within the approved budget limits RU: decani, HR: deans, heads of chairs / departments, academic staff

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Introducing Problem Based Learning in Moldova: Toward Enhancing Students' Competitiveness and Employability

www.pblmd.aau.dk

BSc in Public Administration
Pilot Student-Centered Active-Learning Study Programme

Balti State University „Alecu Russo"

Work Package 3

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Chisinau, 2017

Executive summary

This report is part of Work Package 3. The purpose of this report is to conduct an analysis of the possibility of implementing in the State University of Balti „Alecu Russo" some student-centered and active teaching method, in this case Problem Based Learning (PBL). In order to achieve the proposed goal, according to a methodology developed by the project coordinator, an analysis of the higher education system in the Republic of Moldova, at state and institutional level, was carried out within the USARB. The analysis was carried out in accordance with the methodology of the Work Package 2, where the analysis of the higher education systems in Denmark and the United Kingdom of Great Britain and Northern Ireland, at Aalborg (AAU) and Gloucestershire (UoG) universities respectively, was performed. Similarly, the same levels and criteria in Work Package 2 were respected.

Particularly, the study program „Public Administration" was analyzed at the USARB, trying to compare it according to certain indicators with the programmes seen (including at legal specialties) at Aalborg University and the University of Gloucestershire.

For this purpose, the cross-analysis of the indicators proposed for all three universities was carried out, emphasizing the similarities and differences. The differences are largely due to the degree of academic autonomy in the countries visited compared to the Republic of Moldova. At the same time, according to Report on University Autonomy in Europe: The Scorecard, the United Kingdom of Great Britain and Northern Ireland is ranked III with a score of 94% in terms of academic autonomy, and Denmark is ranked 18 , with a scoreof 56% in terms of academic autonomy.[1]

As a result of this analysis, we tried to elaborate a reconceptualized study plan for the specialty „Public Administration", which will be implemented, starting with September 1, 2017 at USARB.

For its elaboration, the experience of the EU universities, visited during the development of the Work Packages 2 and 3, the current content of the study plan for the mentioned specialty, and the need to comply with the legal framework in force in the Republic of Moldova was taken into consideration. It was attempted to elaborate the Road Map necessary for the implementation of the respective study program, indicating the normative acts necessary to be adjusted to increase the degree of academic autonomy of the universities in the Republic of Moldova.

[1] http://www.eua.be/Libraries/publications/University_Autonomy_in_Europe_II_-_The_Scorecard.pdf?sfvrsn=2, viewed on 30.01.2017

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INTRODUCTION

The knowledge-based society, the use of technology in education, the surplus and increased access to information, the dynamics of the labor market, the multitude of providers of educational services, lead to profound and multidimensional transformations at the level of the universities of the Republic of Moldova in order to increase their competitiveness on a national and why not international levels, which imposed a new way of thinking and conceiving the whole higher education system. In this respect, the higher education system must offer learning and training opportunities that are constantly adapted to the rapid changes in science, technology and the labor market. This presupposes the existence of a higher quality education that provides a curricular compatibility that offers the possibility of training competences in accordance with the requirements needed on the labor market, optimal study conditions, materials, equipment and student centered modern methods.

This report describes the current state-of-the-art situation in the Republic of Modlova and at the institutional level at USARB, from the perspective of the „Public Administration" study programme.

Also, an analysis of valuable bibliographic sources, books that provide a real methodological support for PBL pioneers, was carried out. Six books were studied by team members, the summary of which will be presented in the next chapter.

Particular attention was paid to the analysis of the legal framework governing the initiation and modification of study programmes, focusing in particular on the content of the study programme „Public Administration" provided at the Faculty of Law and Social Sciences of the USARB.

Table 1. Team responsible for the Study Programme

Nr.	Name, surname	Function	Place in the team
1.	Prițcan Valentina	Assoc.prof., PhD	Institutional coordinator
2.	Pojar Daniela	University lecturer	Team leader
3.	Odinokaia Ina	Assoc.prof., PhD	Team member
4.	Boca Sergiu	University lecturer	Team member
5.	Vladimir Rusu	University lecturer	Team member

1 ANALYSIS OF THE BIBLIOGRAPHIC SUPPORT

1.1. INTRODUCTION

In order to implement student-centered methods and, in particular, problem-based learning, the project team analyzed a series of scientific investigations that constitute the bibliographic support of the project. For this purpose the following bibliographic sources were examined:

1. ***New Aproaches to Problem-Based Learning: Revitalising Your Practice in Higher Education*/ edited by Terry Barrett and Sarah Moore.**

This book is a methodical guide for those who want to use the PBL method in teaching. The basics of PBL are to create real problems for students who will work in small teams. This book approaches PBL method via several perspectives as it sets the key dimensions of PBL. The authors present multiple ideas and strategies for integrating PBL into teaching and to have a research-based teaching. For PBL practitioners, this book opens up the possibility of revitalizing and strengthening active teaching and student-centered methods.

The book consists of 20 chapters, structured in three parts:

- *Stakeholders designing PBL initiatives* (chapters 1-8);
- *Students using PBL to enhance capabilities* (chapters 9-14);
- *Sustainability and building capacity in PBL initiatives* (chapters 15-20).

The authors of the book, Terry Barrett and Sarah Moore, review the various theories recently formulated by researchers in the field, making it easier for readers to get acquainted with the latest PBL related investigations. The book is structured in sixteen chapters, which analyze the PBL concept from the perspective of the six principles that govern the PBL method. These principles served as the impetus for the above-mentioned authors to start writing the book.

The book provides the answer to the following questions:

- What is the PBL value;
- What are the modern approaches of PBL;
- How will PBL influence the quality of the teaching process;
- How to revitalize the PBL method.

In the view of these authors, the governing principles of the PBL method are the following:

I. Determination and formulation of the problem in PBL

In the first chapters of the book, the authors offer a multitude of examples of possible problems that can be used in the PBL. Also, they present some methods that would facilitate the determination of the problem, including the role of technologies in this process. A separate chapter is dedicated to describing the way the academic staff collaborates with the labor market representatives in order to determine the problem.

II. Monitoring the PBL activity in small groups

As a rule, activities are conducted in groups of 5-8 people, under the guidance of a tutor, and the authors come up with recommendations to facilitate their work.

III. Evaluation in PBL

The authors propose different evaluation methods to improve the learning process of students and to increase their performance.

IV. Curriculum development in PBL

Developing the curriculum in PBL is a multidimensional managerial process, and the authors analyze and offer the ideas for drawing it. In order to make it comply to the needs of the labor market, universities need to answer the following questions: what are the knowledge necessary for a student? And what are the key competences and skills for a graduate?

V. Developing the necessary skills for employment

The PBL method facilitates the development of such skills required by the employers, such as: communication skills, teamwork, critical thinking, creativity, problem solving, etc.

VI. PBL philosophy

There are described the activities of all those involved in the PBL, starting with the group tutor and finishing with the students. The authors share their own experiences and ideas in this respect, which would allow to refocus the role of the teacher in PBL.

2. *The Power of Problem-Based Learning: A Practical "How to" for Teaching Undergraduate Courses in any Discipline*/edited by Barbara J.Duch, Susan E. Groh and Deborah E. Allen

This book highlights the role of PBL as a major didactic process that focuses on real-world problems and that seeks to motivate students to identify, analyze, and apply different concepts, information. The same, emphasis is placed on group collaboration and effective communication within the group.

The University of Delaware is internationally recognized as a widespread use and development center for PBL. The authors describe the experience gained over twenty years of PBL use at the institution, sharing the knowledge acquired during this period. This book provides answers to the questions that a beginner formulates: How? Where do I start? How do I determine the problems? How do I organize students in groups? and so on.

From the very beginning, the authors make a brief historical incursion and describe how the PBL was implemented at the University of Delaware. The idea was launched in 1994, in Wingspread (USA), at a conference jointly organized by federal authorities, corporate representatives, representatives of higher education institutions. A list of the most important qualities required for a college or university graduate was formulated, such as:

- High level of communication skills, use of modern information technologies, which can be used when needed,
- Decision-making competences - ie effective identification of the problem, collection and analysis of information on this problem and identification of solutions,

- Comptences to work within the global community by possessing diverse skills including adaptability, flexibility,
- Practical skills specific to his/her field of activity,
- Ability to use the above mentioned characteristics to solve concrete problems in complex real world conditions.

All these qualities set the need to change the traditional training style in favor of new methods, focused on the acquisition by students of skills to identify, analyze and solve concrete problems.

The authors also describe the path that needs to be taken from the development of PBL-based educational plans to their implementation, offering advice on how to obtain institutional support for implementation.

3. ***Problem-Based Learning: Case Studies, Experience and Practice*/ edited by Peter Schwartz, Stewart Mennin and Graham Webb**

This book addresses both those who are already using the PBL and the pioneers of this method. For PBL masters, the book is an important source of competence building and further training, and for the PBL pioneers, the work provides a series of instructions that facilitate understanding and enable the successful development of a new PBL teaching / learning strategy. The authors share their accumulated experience throughout their work, presenting concrete situations transposed from real life.

The authors compiled 22 case studies, written by 37 teachers from 6 countries, who specialize in various fields such as medicine, stomatology, biomedicine, natural sciences, architecture, engineering and optometry. The point of interference of these case studies is to present the challenges and difficulties they have encountered during the implementation of the PBL.

In this book the authors reiterate the foundation of the PBL method: students are responsible for their own knowledge, and this can only be done through the following learning steps:

- The problem is an unknown one;
- Group interaction and knowledge sharing;
- Formulating solutions to the problem;
- Identifying learning objectives to progress in solving the problem;
- Individual study between group meetings;
- Sharing the knowledge obtained individually with the group to which he/she belongs and their application in solving the problem;
- Repeating, as the case may be, the learning stages;
- Reflecting on what he/she learned.

The guiding ideea of the book is that the assessment methods used in PBL must match the way students learn in PBL.

4. ***Psychology for Psychologists: A Problem Based Approach to Undergraduate Psychology Teaching*/ edited by Alexia Papageorgiou, Peter McCrorie, Stelios Georgiades and Maria Perdikogianni**

The authors of this book made a summary of the most important theories of PBL, namely: the origins of PBL, modern teaching methods, and their application in practice, methods of organizing

the classroom so that students can obtain problem-solving skills. In principle, this book refers to PBL in teaching psychology. The authors describe a curriculum with the application of PBL to the specialty of psychology, presenting case studies and problematic situations. Also, the book is a useful source of information on how to endow the classroom where training will be provided using the PBL method. The book also describes how psychology has become a subject taught in universities and the role it plays in the formation of future specialists in psychology. In this context, the authors come up with recommendations to change the teaching system to improve the training of future psychologists as professionals. In the opinion of the authors, PBL requires the analysis of a large amount of information independently and its application in parctice. To facilitate learning, information technologies such as: MOODLE, Podcast, webinar, chat, forum, drop-box etc. will be used. The same, on-line, peer-to-peer evaluation is done.

5. *Problem- based Learning Online*/ edited by Maggi Savin-Baden and Kay Wilkie

The book provides the solution necessary to use ICT in teaching-learning. Its purpose is to convince the specialists of different educational institutions to opt for modern training methods, to apply information technologies on a large scale and to develop the training system focused on problem solving in the specialization courses. The book is structured in four chapters. In the first chapter there are presented the main problems and challenges of the PBL training system. The second chapter presents a description of how a teacher who uses traditional teaching methods can become a teacher using modern methods. The authors describe the challenges and barriers that are in their way to reconvert. In the following chapters we find information on modern training technologies and the need to train pedagogical skills in young teachers.

6. Teaching for Quality Learning at University: What the Student Does, 4th edition/ edited by John Biggs and Catherine Tang

In this book are presented the ideas of redimensioning the didactic process in terms of changing the emphasis: centered on the learner, emphasizing more the role of the student, and the teacher is a facilitator who must clearly define the learning outcomes that students should reach at the end of the subjects taught by teachers. In this context, the book is based on the concept of **constructive rally**, used in the implementation of learning based on results. The ***constructive rally*** identifies the learning outcomes to be achieved and helps teachers to develop teaching-learning activities that will help students achieve these results and be able to assess how well these outcomes have been achieved. Each chapter includes tasks that provide ideas and recommendations on how this concept could be implemented. The book offers a number of practical examples from the experience of several teachers in countries such as Australia, Hong Kong, Ireland, North America, etc. The authors assert that there are 3 levels of teaching. The first model is based on differences between students: good students and less good students. In this case, teachers assume the responsibility for teaching and what refers to students' learning and success. Failure is explained by the fact that certain students belong to a particular social environment, the pre-university institution graduated, etc. Teachers at second level rely on what teachers do. This model is equally based on sharing, but the sharing of concepts and understanding, not just information. The learning process is appreciated according to what the teacher does and not the type of student he/she interacts with. This method of teaching is centered on the teacher. The third level is based on what the student does and how he/she relates to the teaching process. This model of teaching is student-centered and

the purpose of teaching is to provide learning support. In order to achieve this goal, it is necessary to establish the following:

- What is needed to learn for students to achieve learning outcomes;
- How students understand the content taught and how it integrates in the desired outcomes;
- What kinds of learning-teaching activities are needed to reach the desired levels of understanding.

So, according to the latter model, the role of the teacher changes, he/she is no longer the decisive factor and the expert, and this can create psychological barriers for many teachers who are accustomed to the traditional teaching system.

In the case of PBL application, the relationship between student and teacher changes: the teacher is seen as a mentor, helping students to adapt as much as possible and „perceive" the problem.

As a conclusion, we can state that the briefly analyzed bibliographic sources present valuable methodological benchmarks for those who want to become practitioners of PBL. It is important to pay more attention to the quality of teaching by applying new methods, by focusing teaching on the learner. In this respect, university management is also interested in the use of modern teaching methods and technologies, stimulating them by establishing an adequate growth and motivation system.

2 METHODOLOGY

2.1 METHODOLOGICAL FRAMEWORK

In order to develop the report of Work Package 3, we will be guided by the methodology developed in the project and that served as a basis for conducting the comparative analysis of problem-based learning in the partner countries of the European Union: Denmark and the United Kingdom of Great Britain and Northern Ireland, presented in the Report on Work Package 2.

When developing the pilot study programme, we took into account the degree of use of the PBL method in the various universities we visited and the experience we studied, including the use of other active teaching methods. Each university has its own specificity and an individual approach per programme on the use of active teaching methods, especially of PBL. In the context of teaching legal subjects in study programmes subject to analysis for the specialty „Public Administration", we found that PBL does not apply to the same extent as in other programmes. In the science of law, being a rigid and static one, students can not excel without theoretical knowledge.

In order to start this pilot study programme an updated version of the educational plan was developed in the specialty „Public Administration", where, within the various subjects taught, the teachers will use active teaching methods, especially PBL. The desirability of reaching the 50 to 50 ratio between courses and the project is difficult to achieve within the „Public Administration" specialty because of the specifics of the subjects taught and the limitations imposed by the legal framework. In this context, we come to the conclusion that, in the process of implementing the study programmme based entirely on PBL, the Framework Plan for Higher Education, approved by Order of the Minister of Education no. 1045 of 29.10.2015, may present some inconvenience from the following perspectives:

- while describing university autonomy as a fundamental principle in the exercise of academic freedom, the Framework Plan significantly reduces it by requiring universities, when developing educational plans, to include compulsorily subjects for the training of general abilities and skills (10%) and subjects of socio-humanistic orientation (10%). In this way, the proportion of fundamental and specialty subjects decreases proportionally, which contributes primarily to the training of professional skills of future specialists;
- taking into account that the duration of studies in „Public Administration" specialty is of three years, the compulsory inclusion of subjects that do not develop the concrete professional skills leads to the natural exclusion from the educational plan of some courses inherent in the formation of the future specialist;
- the experience of some prestigious universities in Romania (University of Bucharest, „Babeş-Bolyai" University of Cluj-Napoca, „Alexandru Ioan Cuza" University of Iaşi, etc.) is a telling example of true autonomy in the elaboration of the educational plans. Thus, the educational plans within these institutions contain exclusively fundamental and specialized subjects that contribute to the multilateral professional training of the student, leaving no room for certain general subjects, which would be attributed more to the high school cycle.

Based on the above and taking into account the legislative constraints that can not be removed without causing some long-term effects, in agreement with the decision makers of the USARB, it was decided to develop a realistic educational plan by the project team, which has chances of implementation and which is PBL oriented. For its success, it is necessary that all those who are teaching to realize that it is necessary to focus on students' thinking, their involvement in conducting projects, solving problems that are related to practical life (by finding new, original solutions to them), on scientific research and learning new research techniques, stimulating the student's thinking, imagination, creativity and originality, thus removing the lack of motivation and formalism of both sides of the didactic process. Some actions are outlined in the Roadmap.

2.2 DATA COLLECTION

To achieve the objectives of the study, an office research was initially carried out. Analyzing the bibliographic sources presented above on modern and innovative teaching methods centered on the student, the criteria (and subcriteria) used to describe the institutional framework of the respective study programme were identified.

At the primary stage, the institutional context of integrating a study programme within the USARB was described.

In the second stage, the data derived from normative acts regulating, directly or indirectly, the higher education system, the USARB Charter and other institutional acts of this kind were collected and analyzed.

A comparative analysis of the criteria was then carried out, highlighting common points and differences between the system in Denmark, the United Kingdom of Great Britain and Northern Ireland, and the Republic of Moldova.

Table 2. Data reporting model

Question / Problem	Source consulted	Findings	Reflections
L1: System level			
L2: University management level			
L3: Faculty/Department level			
L4: Study Board level			
L5: Integration of disadvantaged students			
L6: Infrastructure (Physical environment)			
L7: Study programme level			
L8: Pedagogical training level			

2.3 DATA ANALYSIS

Table 3. Cross-analysis template

Criteria, properties, indicators	USARB	AAU	UoG
L1 criterion etc.			

The table below summarizes more important criteria for the study performed, common models that emerged during the analysis, as well as variations.

Table 4. Data reduction model

	Common models	Peculiarities
L1: System level Criterion 1 Criterion 2 Criterion 3		

3 BSc in "Public Administration" at USARB

3.1 Introduction

The traditions of the State University „Alecu Russo" of Balti are related to the establishment in 1945 in Balti of a Teacher Institute (Decision of the Soviet of People's Commissars of M.S.S.R. No. 532 of June 12, 1945). In 1953, by the Decision of the Council of Ministers of M.S.S.R. no. 846 of August 13, 1953, the Teacher Institute was reorganized into the State Pedagogical Institute of Balti.

In 1959, the Pedagogical Institute was named *Alecu Russo*.

Based on the Government Decision of the Republic of Moldova no. 330 of May 21, 1992, the State Pedagogical Institute „Alecu Russo" of Balti was reorganized into the STATE UNIVERSITY "ALECU RUSSO" OF BALTI.

The university comes from more distant relatives. In 1906, on September 10, there was an educational event for the education in Balti: the Gymnasium of Boys was inaugurated, and later on - the Gymnasium of Girls „E. I. Genschke".

After the union of Bessarabia with Romania in 1918, the Gymnasium of Girls „E. I. Genschke" became the High School of Girls „Domnita Ileana", which in 1937 moved to the current administrative building of the University of Balti. The Gymnasium of Boys passed through the same metamorphosis, being reorganized in the High School of Boys „Ion Creanga", having its headquarters in the current block of study no. 6 (holied on October 31, 1943).

The Gymnasium of Girls „E. I. Genschke" and the High School of Girls „Domnita Ileana" remained in history, the last one ending its activity in 1944. The High School of Boys „Ion Creanga" had more luck, being re-established in 1995, functioning in its initial building.

Block of studies no. 2, the oldest of all the blocks (commissioned in 1896), hosted in turn the Financial Administration of the City, the Normal School, the Industrial Secondary School for Girls. The Normal School operated in the interwar period. In the post-war years, the Pedagogical School took its place until 1954, becoming the current Pedagogical College (since 1992).

All these schools have a direct connection with the University of Balti: they functioned on the current territory of the university campus (unique for the universities of the Republic of Moldova), all of them facilitating in a certain way the emergence of the only higher education institution in the northern part of the republic.

At present, the State University „Alecu Russo" of Balti offers study programmes in a number of areas, specialties and specializations, for various cycles.

The State University „Alecu Russo" of Balti assumes the mission of promoting social progress, generating and transferring knowledge and contributing to the development of the contemporary society. The State University „Alecu Russo" of Balti contributes to the development of the intellectual capital, excellence in education, training and scientific research. The main values promoted by the University are: freedom of thought and expression, seeking and promoting truth,

integrity, equity, social responsibility, competence, honesty, courage. The mission of the University consists of the following components: education, professional training, scientific research, contribution to the development of contemporary society.

In the field of education, the State University „Alecu Russo" of Balti focuses on the following principles:

- the formation of multilateral personalities developed in the spirit of European values, endowed with critical thinking, active, responsible, with leadership abilities;
- professional training in various fields of competent and responsible specialists who understand the issues related to socio-cultural, economic and technical-scientific progress, able to integrate into the free labor market in a knowledge-based society.

The State University „Alecu Russo" of Balti, being a center for advanced education, professional training and research, assumes the following fundamental objectives:

a) asserting the identity of national culture and participating in the process of European integration;
b) developing the society in a state of law, free and democratic;
c) promoting national education, science and culture;
d) conducting a formative, creative and stimulating education in accordance with the requirements of contemporary society;
e) promoting academic freedom in line with standards in the field;
f) continuous improvement of the didactic-scientific process by promoting a dynamic and flexible education adapted to the requirements of the labor market under competitive conditions;
g) improving the methodology of matching studies in accordance with the system of functioning of the learning process based on transferable credits ensuring academic mobility;
h) training and professional development in various fields of highly qualified specialists with real chances of employment on the free labor market;
i) implementation of university management based on modern quality requirements;
j) involving the members of the academic community in the development of European and universal science and culture;
k) ensuring the continuous training of teaching or research staff and setting criteria for didactic and scientific competence in their evaluation and promotion process;
l) promoting scientific research, technological development, educational innovation programmes, and scientific, technical and cultural creation;
m) developing partnerships in different fields, both at national and international level;
n) integration of research centers into national and / or international networks and development of fundamental and applied research generating knowledge;
o) capitalizing the knowledge and results of scientific research in order to develop the society;
p) providing high-quality specific services and products to both the academic community and its beneficiaries;
q) patrimony protection, modernization and development of the university's

infrastructure.

Being a modern institution, promoting the social progress, oriented towards the creation and transmission of knowledge values, the State University „Alecu Russo" of Balti is in a permanent search, analysis and reflection on the experience of the university and reference research centers in the country and abroad, in view of improving and diversifying the activities and services provided to the beneficiaries or the social partners.

Professional training is provided in 42 specialties (cycle I), 23 specialties (cycle II) and 8 specialties (cycle III).

In 2012, the university ranked 6849 in the top 20000 world's top universities, and in 2013 ranked 6165 (source: Ranking Web of World Universities).

3.2 SYSTEM LEVEL

Preliminaries. The educational system of the Republic of Moldova joined the Bologna Process in 2005, a year after which several reforms in the field of higher education were carried out. The main directions for implementing the reforms have traditionally focused on three priority areas:

a) changing the structure of the university system, by organizing higher education in three cycles, introducing the Diploma Supplement and introducing the European Credit Transfer System;

b) organizing the internal and external quality evaluation and monitoring system by creating a Quality Assurance Agency independent from the government, and quality management centers at each university;

c) linking the university offer to the requirements of the market by tracking the graduates' path, creating links with employers, professionalising the education, etc.

The structure of the education system. The education shall be structured by levels and cycles, in accordance with the International Standard Classification of Education (ISCED-2011):

a) Level 0 – early childhood education:
   - ante-preschool education;
   - preschool education;

b) level 1 – primary education;

c) level 2 – lower secondary education, cycle I: gymnasium education;

d) level 3:
   - upper secondary education, cycle II: lyceum education
   - secondary technical and vocational education and training;

e) level 4 – post-secondary technical and vocational education and training;

f) level 5 – post-secondary non-tertiary technical and vocational education and training;

g) level 6 – higher education, cycle I: bachelor's degree;

h) level 7 – higher education, cycle II: master's degree;

i) level 8 – higher education, cycle III: doctoral degree .

The educational process is carried out on the basis of the state educational standards, approved by the Ministry of Education, irrespective of the type of property and the legal form of organization of the educational institution.

The duration of the study year, internships, exam sessions and vacations shall be established for each level of education through the Framework-plan approved by the Ministry of Education.

The higher education in the Republic of Moldova shall be aimed at:

a) creation, keeping and dissemination of knowledge at the highest level of excellence;
b) training of highly qualified specialists competitive on the national and international labour market;
c) creation of life-long training opportunities;
d) keeping, development and promotion of the national cultural and historical values, in the context of cultural diversity.

General structure of higher education in the Republic of Moldova. The higher education shall be structured in three cycles:

a) cycle I – Bachelor's degree (ISCED level 6);
b) cycle II – Master's degree (ISCED level 7);
c) cycle III – doctoral degree (ISCED level 8).

The research, development and innovation activities shall be carried out within the doctoral and postdoctoral training.

Organization of the higher education. The professional training in the higher education institutions shall be carried out through the appropriate study programmes.

The higher education programmes shall include the educational and research or artistic creation activities, which provide training in an academic or advance professional field, in accordance with the regulatory framework in force. The organization of the higher education programmes shall be the responsibility of the higher education institutions.

The higher education programmes shall be differentiated by:

a) cycle of the higher education;
b) professional training field;
c) organizational form of the higher education.

The Bachelor's and Master's degree shall be organized in the following forms:

a) full-time;
b) part-time;
c) distance learning.

The doctoral degree shall be organized in the following forms:

a) full-time;
b) part-time.

The higher education institutions shall have the status of university autonomy. The university autonomy is the right of the university community for organization and self-management,

exercising the academic freedoms without any ideological, political or religious interferences, assuming a set of competences and obligations in line with the national strategies and policies for the development of the higher education.

The higher education shall be regulated through the Nomenclature of professional training fields and specialties that shall be part of the state educational standards, and shall determine the fields, specialties, under which the professional training shall be carried out in the higher education.

The Nomenclature of professional training fields and specialties shall be approved by the Government, at the Ministry of Education's proposal, by mutual agreement with the relevant ministries.

Bachelor's degree – cycle I of higher education. The holders of baccalaureate diploma or of equivalent study document, recognized by the competent authority for recognition and equivalence of study documents and qualifications, may attend the admission competition for cycle I.

The bachelor's degree corresponds to 180-240 ECTS credits, meaning 30 credits per each semester.

The duration of the Bachelor's degree programmes and the appropriate number of ECTS credits awarded to a professional training program (field, specialty) shall be established by the Ministry of Education based on the:

a) the National Framework of Qualifications in Higher Education;
b) the occupation framework and the competences necessary for the obtained qualification.
c) specifics of the professional training field.

Cycle II of higher education – Master's degree. The competition for admission to the cycle II of higher education may be attended by the holders of bachelor's degree diploma or of equivalent study document, recognized by the competent authority for recognition and equivalence of study documents and qualifications.

The Master's degree shall correspond to a total number of 90-120 ECTS credits, respectively 30 credits per each semester.

The number of ECTS credits accumulated in cycles I and II shall account for at least 300 credits.

In the cycle II, the master's degree shall provide:

a) in-depth training programmes, which ensure the development of skills in a specialization from the area graduated in cycle I;
b) interdisciplinary or multi-disciplinary programmes, which ensure the development of specific transversal skills for two or more areas of professional training;
c) complementary programmes, which add the skills acquired during the bachelor's degree program, in order to extend the area of employability on the labour market.

According to the types of programmes indicated above, the orientation of master's higher education can be:

a) scientific master's degree, with the aim of deepening into a scientific field and having the purpose of producing original scientific knowledge;
b) professional master's degree, in order to train / strengthen professional skills in a specialized field and which can form a basis for professional career.

The master's degree programmes shall also contain a scientific research or artistic creation component, in line with the specifics of the training program attended.

Cycle III – doctoral higher education. The doctoral degree programmes shall be organized in doctoral schools and shall be funded through distinct mechanisms. The doctoral schools shall be organized within the higher education institutions, as well as within the national and international consortiums or partnerships, including the research and innovation organizations.

The doctoral degree programmes shall account for a number of 180 ECTS credits.

The doctoral degree programmes can be of two types:

a) PhD in science, which encompasses the production of original and internationally recognized scientific knowledge. The PhD in science shall serve as a pre-condition for the professional career development in the higher education and research;
b) PhD (professional doctorate) in arts or sports, which encompasses the production of original knowledge based on scientific methods and systematic reflection related to some artistic creations or sport performances at the national and international levels.

The doctoral higher education may be organized as full-time or parttime training.

Evaluation in higher education in the Republic of Moldova. The external evaluation of the educational process in higher education shall be performed by the National Agency for Quality Assurance in Professional Education (ANACIP). The National Agency for Quality Assurance in Professional Education is an administrative authority of national interest, with legal personality, autonomous to the Government, independent in its decisions and organization, and funded from the state budget and own revenues.

The internal evaluation of the educational process in higher education shall be performed by the institutional structures for quality assurance, based on the institutional regulation.

The higher education institutions shall be subject to external quality evaluation once in five years, in line with the methodology and criteria developed by the National Agency for Quality Assurance in Professional Education.

The external evaluation of the higher education institutions shall be taken into account in:

a) ranking the higher education institutions by categories within the accreditation procedure;
b) authorization for provisional functioning, periodical accreditation and reaccreditation of the higher education institutions, as well as in ranking the study programmes.

The mission of the National Agency for Quality Assurance in Professional Education is to develop and promote the quality culture in vocational education, higher and continuing education, contributing to greater economic competitiveness and social cohesion in the Republic of Moldova.

The aim of the National Agency for Quality Assurance in Professional Education is to ensure an integrated, reliable, objective and transparent system of external evaluation and accreditation of

institutions and study programmes in vocational education, higher and continuing education in the Republic of Moldova.

ANACIP has the following strategic objectives:

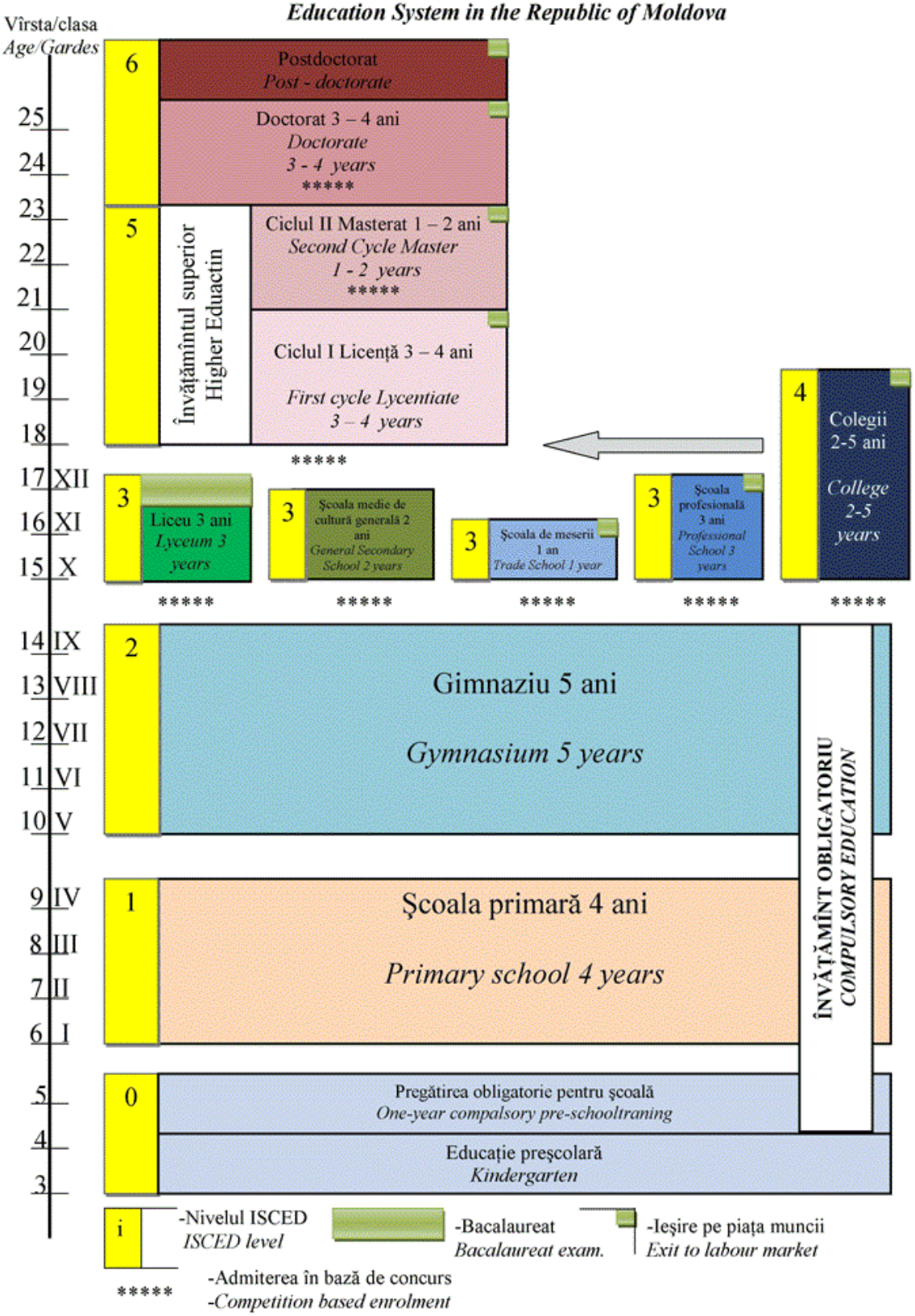
- to contribute to the development and promotion of the quality culture in vocational education, higher and continuing education;
- to evaluate study programmes and the capacity of organizations providing vocational education, higher and continuing education in order to achieve the quality standards;
- to ensure the application of the Standards and Guidelines for Quality Assurance in the European Higher Education Area in vocational education, higher and continuing education in the Republic of Moldova;
- to ensure access to public information about the quality of vocational education, higher and continuing education in the Republic of Moldova;
- to propose strategies and policies to partners in order to ensure and develop quality in vocational education, higher and continuing education;
- to promote professionalism and competitiveness of vocational education, higher and continuing education in the Republic of Moldova;
- to obtain international recognition of the Agency.

ANACIP has the following duties and responsibilities:

a) performs state policies on quality assurance in vocational education, higher and continuing education;
b) develops, in accordance with the European standards in the field, and makes public its own methodology of evaluation and accreditation of the institutions providing professional training programmes and their programmes which shall be proposed to the Government for approval;
c) formulates and reviews periodically, based on European and international best practices, the accreditation standards, national reference standards and performance indicators used in the evaluation and quality assurance in vocational education, higher and continuing education;
d) evaluates, on a contract basis, institutions providing vocational training programmes and educational services, and their programmes, in order to authorize provisional operation, accreditation and reaccreditation in vocational education, higher and continuing education;
e) performs, on a contractual basis, at the request of the Ministry of Education, the quality evaluation of some programmes and institutions providing vocational training programmes in vocational education, higher and continuing education;
f) ensures objectivity and validity of the results obtained in the process of external evaluation of institutions providing educational services and their programmes;
g) ensures transparency in the external evaluation process, including the publication of evaluation results;
h) develops and publishes papers on the evaluation and accreditation of educational institutions, of institutions providing educational services and their programmes;

i) publishes manuals, methodological guidelines, synthesis papers of best practices in the field of evaluation and internal and external quality assurance;
j) elaborates and approves the Agency's Code of Professional Ethics, including expert evaluators;
k) presents its annual activity report to the Government and publishes it on the official website of the Agency;
l) regularly develops self-evaluation reports on the quality of its own activity for external evaluation by similar agencies in other countries;
m) cooperates with similar agencies in other countries in order to develop and implement effective measures to improve the quality of profdessional training programmes;
n) undertakes the necessary steps to be registered in the European Quality Assurance Register for Higher Education in no more than 3 years from its establishment.

Sistemul de Învăţământ din Republica Moldova
Education System in the Republic of Moldova



3.3 UNIVERSITY MANAGEMENT LEVEL

According to the legislation in force, the management bodies of the universities, their structure and their number are established by the Education Code of the Republic of Moldova. The system of management bodies in the higher education institutions shall encompass the Senate, the Strategic and Institutional Development Council, Scientific Council, Faculty Council, Administration Council and Rector of the institution[2].

The system of management bodies of the USARB is composed of the Senate, the Strategic and Institutional Development Council, Scientific Council, Faculty Council, Administration Council and Rector of the institution. The USARB's managerial staff consists of the rector, vice-rector, dean, head of department or head of chair, director of the doctoral school. Operational management of the USARB is provided by the rector, assisted by the vice-rectors, with the support of the Administration Council. The Rector is the USARB's budget executor.

The rector shall be elected by the General Assembly of teaching and research staff and by student representatives in the Senate and the faculty councils, voted by the majority of members. The rector shall be appointed, based on the election decisions through the founder's order, within 3 months at most. The rector shall appoint the vice-rectors during his/her mandate, no later than 6 months from the date of appointment.

The Senate of the USARB represents the supreme management body and shall have the following competences and duties:

- to ensure the compliance with the principle of academic freedom and university autonomy;
- to develop and approve the University Charter;
- to elaborate and approve the University Charter, the Regulation for the functioning of the Senate, the Regulation of the Strategic and Institutional Development Council, the Regulation of the Scientific Council, the Regulation of the Administration Council, the Regulation for Admission to Studies, the Regulations of the faculties, the academic departments, the chairs, as well as other internal regulatory acts;
- to approve the Institutional Development Strategic Plan;
- to approve the USARB's budget;
- to develop and approve the methodologies and regulations for organization of the academic, research and artistic creation activities and programmes within the USARB, as well as the methodologies and regulations for recruitment, employment and assessment of the teaching staff;
- to approve the organizational chart and the functional structure of the USARB;
- to confirm, without the right to amend, the list of the Institutional Strategic Development Council members.

[2] Codul educației al Republicii Moldova, nr.152 din 17.07.2014, art. 102

Members of the Senate are elected by direct and secret vote from among the didactic-scientific staff, didactic and auxiliary staff - elected by the secret vote of the teaching staff of the faculties, departments, scientific centers, and from among students - elected by academic groups and student associations, from among representatives of the trade union bodies - elected by trade union organizations. The rector, vice-rectors and deans are ex officio members of the senate. The total number of members of the Senate shall be determined on the basis of the proportionality principle. Students are represented in the Senate in a proportion of 1/4 of the total number of members. The Senate mandate shall last for 5 years, synchronized with the mandate of the rector. The mandate of the Senate members among students shall last for 1 year that may be renewed. The president of the senate is the rector. The Secretary of the Senate is elected by the Senate in the manner set out in the internal Regulation on the operation of the Senate.

The Strategic and Institutional Development Council is the management body that shall meet at least once a quarter or whenever necessary, at the initiative of the Chairman or of at least 1/3 of the Council members and shall have the following competences and duties:

1) to coordinate the development of the Strategic and Institutional Development Plan encompassing the vision, mission, USARB's development strategy and the main actions for a period of at least 5 years and to submit it to the Senate for approval;
2) to monitor and evaluate the efficiency of using the financial resources and to submit the educational institution's draft budget to the Senate for approval;
3) to approve the model-study contract and the amount of tuition fees;
4) to ensure the institutional management related to the intellectual property rights and technological transfer;
5) to make decisions, with the approval of the Senate, regarding:
   - development and consolidation of the USARB's patrimony – decision to be approved with at least 2/3 votes of the Council members;
   - launch and closure of the study programmes – decision to be approved with at least 2/3 votes of the Council members;
   - methodology for remuneration and motivation of personnel;
   - entrepreneurship activities, public-private partnerships and cooperation with the businesses;
   - involvement in consortiums and mergence with other higher education institutions;
6) to organize and carry out the election for rector's vacancy, in line with the Institutional Regulation for organization and carrying out the elections.

The Strategic and Institutional Development Council shall be composed of nine members, as following:

1) three appointed members: by the Ministry of Education – one member, by the Ministry of Finance – one member, by the competence ministry – one member. The appointed members shall not be employed within the respective ministries;
2) two members - the titular teaching staff, who do not hold leadership positions and are not members of the Senate, selected via secret vote by the General Assembly of the faculty councils' members and representatives of students from the Senate and the faculty councils;

3) two persons delegated by the Senate, who are external experts and are not employees of the respective institution;
4) rector;
5) vice-rector responsible for financial matters.

The composition of the Strategic and Institutional Development Council shall include economists and lawyers. The person appointed by the Ministry of Finance shall have specific competence in the financial monitoring and auditing. The principle of gender equity shall be observed upon establishing the Strategic and Institutional Development Council. The members of the Strategic and Institutional Development Council shall be appointed for a five-year mandate. The Chairman of the Strategic and Institutional Development Council shall be elected by the members of the Council. The employees of the USARB cannot be elected as Chairman of the Strategic and Institutional Development Council. The members of the Strategic and Institutional Development Council, appointed by the USARB shall receive a monthly allowance, except for the Rector and vice-rector. The respective allowance shall be paid from the USARB's budget for members appointed by the institution, and for the members appointed by the founder and the the Ministry of Finance - from the founder's budget. The remuneration shall account for an average salary in the economy - for the members, and the doubled average salary in the economy – for the Chairman of the Council. The members of the Strategic and Institutional Development Council shall be accountable for the decision-making, in line with the legislation in force.

The USARB's Scientific Council is the collective body that coordinates the entire doctoral activity within the University, providing institutional, administrative, and logistic support to subordinated doctoral schools. The activity of the Scientific Council is coordinated by the Rector and the Vice-Rector for Research. The Scientific Council is organized and operates in accordance with the Regulation on the operation of the Scientific Council, approved by the Senate. The Scientific Council consists of:

- Chairman of the Scientific Council;
- one representative from the doctoral schools elected by the universal, direct, secret, and equal vote of the doctoral supervisors;
- at least one member of the Scientific Council elected by universal, direct, secret, and equal vote of students at USARB's doctoral schools.

Also, members of the Scientific Council and other USARB or non-USARB staff from the country or abroad, science, industrial and socio-economic sectors, or representatives of doctoral students may also be members of the Scientific Council. The mandate of the Scientific Council's members is 5 years. The Chairman and the members of the Scientific Council, who are scientific-didactic staff or researchers, must have the right to conduct doctorates. The Scientific Council is headed by a Chairman, assimilated / associated with the position of vice-rector, appointed following a public competition organized by the USARB. The meetings of the Scientific Council are validated if at least 2/3 of the members participate, and the acts of the Council are adopted by a majority of the votes of the members present. The Scientific Council has the following tasks:

- to develope the USARB's Research and Innovation Strategy;

- to elaborate the draft Regulation for the organization and functioning of the doctoral study programmes, which it submits to the approval of the Senate;
- to approve decisions to set up, divide, merge or abolish doctoral schools within the USARB;
- to approve internal regulations of the doctoral school / schools;
- to approve the doctoral study programmes of the doctoral schools, as well as the ones organized with other institutions providing doctoral studies in the country or abroad;
- to endorse fees for doctoral studies, proposed by the councils of the doctoral schools, and their submission to Senate approval;
- to approve the framework model of doctoral joint-agreements for doctoral schools;
- to adopt the necessary measures to ensure the quality of doctoral studies, for the proper conduct of the periodical evaluations of the doctoral schools and of the doctoral supervisors, for the compliance with the norms of ethics and deontology by the doctoral supervisors and the doctoral students;
- to select doctoral supervisors to work in a new doctoral school.

The Scientific Council prepares admission methodologies on a yearly basis and establishes the list of necessary papers for admission to the doctorate and sends them for approval to the Senate. The Scientific Council also carries out other specific tasks, established by the Education Code, the USARB's Charter, the institutional regulation on the organization and functioning and other normative acts.

3.4 FACULTY/DEPARTMENT LEVEL

Starting from the demands of the social reality regarding the staff, especially in the northern part of the republic, and taking into account the wishes of the public opinion, the traditions and the potential of the University, the Faculty of Economics and Law was founded in 1995 within the State University „Alecu Russo" of Balti. The issue was initially discussed at the College of the Ministry of Education of the Republic of Moldova on 22.06.1995 (Decision no.12.3.2 of 22.06.1995). On 14.07.1995, on the basis of the College's decision, was issued the Order no. 251 of the Ministry of Education of the Republic of Moldova "On the opening of the Faculty of Economics and Law at the State University „Alecu Russo" of Balti". The administration of the University carried out an intensive activity in order to ensure the professional training of the students of the new faculty, selecting the necessary staff and ensuring the establishment of new subdivisions capable of qualitatively solving the new tasks. As a result of institutional consolidation, increasing number and quality of teaching staff, increasing number of students in the Law Department of the Faculty of Economics and Law and in order to optimize the professional and research activity, as a result of examining the proposal of the State University „Alecu Russo" of Balti on the structure and the didactic-scientific potential of the nominated faculty, the Council of the Ministry of Education and Science of the Republic of Moldova adopted, on 24.08.1998, the decision regarding the establishment of the Faculty of Law, as an independent structure within the University. Based on the decision of the Council of the relevant Ministry, the Senate of the University concretized the institutional structure of the Faculty of Law, the functions of the departments, their composition,

etc. During the years 1998 - 2013, the University Rectorate contributed to the institutional consolidation of the new faculty, restructuring the faculties' subdivisions depending on the premises created, establishing the Department of Private Law, the Department of Public Law and the Department of Socio-Humanistic Disciplines. The division of the Department of Law into the Department of Private Law and the Department of Public Law was stipulated in the decision of the College of the Ministry of Education of the Republic of Moldova „On the results of the control carried out at the State University „Alecu Russo" of Balti" of 27.05.2004. Under the Decision of the Senate of the State University „Alecu Russo" of Balti on August 26, 2013, minutes no.1), the structure of the Faculty of Law was reorganized under the name of the *Faculty of Law and Social Sciences*. Within the faculty there are provided all the specialties of the first cycle, Bachelor (Law and Public Administration) and the specializations from the second cycle, Master (Criminal Sciences and Criminology, Business Law, European Policies and Public Administration, Labor Relations and Human Resource Management) from the Faculty of Law and the specialties of the Faculty of Psychology and Social Assistance (Social Assistance, History and Civic Education), together with the teaching staff and the auxiliary staff of the departments that serve these specialties / specializations.

The Faculty of Law and Social Sciences represents a structural subdivision of the USARB responsible for organizing and conducting the educational-training process, performing methodical, educational and scientific research activities for 7 specialties: Law, Public Administration, Social Assistance, History and Civic Education.

Within the faculty there are established 3 departments/chairs that organize and perform the didactic and scientific activity at one or more related disciplines.

The Faculty of Law and Social Sciences benefits from autonomy within the limits of the principle of subsidiarity under the USARB's Charter. The Faculty of Law and Social Sciences is entitled to undertake all the public responsibilities of the University in accordance with its mission and objectives, unless the intervention of the higher level authorities has obvious advantages resulting from the volume and nature of responsibilities and the need to ensure the effectiveness of USARB's public action. The Faculty of Law and Social Sciences aims at organizing and carrying out the educational-training process, carrying out methodical, educational and scientific research activities for areas and specialties accredited in the first cycle of the Bachelor's degree and the second cycle of the Master. The activity and institutional development of the faculty is based on the Strategic Development Plan approved by the Faculty Council for a period of 5 years. Based on this, Operational Plans of the Faculty are being developed. The results of teaching and scientific activities in the faculty are made public through annual self-evaluation reports. The USARB's Senate regularly assesses the work of faculties according to academic and accreditation standards of evaluation.

Any member of the university community within the faculty has the vocation to participate in the management of the university activity. The Faculty of Law and Social Sciences encourages and acknowledges the involvement of students in the decision-making process and in the evaluation mechanisms of the university's activity.

The professional training process is organized on the basis of the educational plans developed

and approved by the Senate, coordinated with the Ministry of Education and the disciplinary curricula, elaborated within the departments / chairs. Educational plans and curricula by subjects are updated annually.

In fulfilling its mission, the Faculty of Law and Social Sciences achieves the following objectives:

a) training of qualified staff in the fields of: Law, Public Administration, History and Civic Education, Social Assistance;
b) coordination of didactic and research activities of departments/chairs and other subdivisions and implementation of their results;
c) training of specialists through full-time education, part-time education, and through continuous professional training programmes;
d) ensuring sound professional training, training of the professional skills and competences necessary for the graduates to carry out the specific activities they will perform after finishing their studies;
e) ensuring a high quality level of studies, in accordance with the needs of the practice, the new social requirements, developments of contemporary science and technology;
f) modernizing the educational process according to the available hard and software endowment, by promoting and expanding the use of information systems for training and evaluation;
g) knowledge and adaptation of European practices in areas for which the Faculty of Law and Social Sciences is empowered;
h) creating a favorable climate between the Faculty's subdivisions in intellectual, cultural and moral terms;
i) constant and progressive assertion of the faculty as an outbreak of education and civic consciousness;
j) promoting partnership with other similar institutions in the country and developing collaborative relationships with foreign faculties.

The Faculty of Law and Social Sciences actively promotes the activity and interaction of students, teaching staff and faculty bodies through information and communication technologies. In the training and assessment of students, information systems will be used through:

a) elaboration in electronic format of the curriculum, the curricular support, the schedule of the study process, etc., placing them on the faculty or university's website;
b) initiating the process of implementation of the training process management systems, using specialized software (e.g. MOODLE);
c) organizing classes, seminars, laboratories, student's individual work, current and final assessments by using ICT and on-line interaction provided by the faculty.
d) electronic recording of students' performance at seminars, exams.

The organizational structure of the Faculty is flexible, being determined by the development strategy of the Faculty. The Faculty of Law and Social Sciences comprises departments/chairs, scientific-didactic laboratories, centers and other subdivisions. Within the faculty there are three departments / chairs: the Department of Private Law, the Department of Public Law and the Department of Social and Human Sciences and Social Assistance.

The department/chair

The department/chair is a subdivision of the Faculty that organizes and performs didactic, methodological and scientific activities within several related course units (subjects). The department/chair consists of teaching staff and, where appropriate, research and auxiliary staff from a subject or different subjects. The department/chair can coordinate fully or partially integrated research centers. the department/chair is headed by the Office of the Department/Chair, composed of the head of the department/chair and at least 2 members elected by open vote from among the full-time teaching staff from that department/chair. Operative management of the department/chair belongs to the head of the chair. Within the department/chair there may be sections established to ensure the activity of the department/chair at one or more course units. The department/chair is organized and operates under the USARB's Statute of this Regulation and its own regulation approved by the Faculty Council. The department/chair has the following competences:

a) draws up annual work plans;
b) develops and improves the educational plans for the specialties it coordinates;
c) prepares, proposes for approval and evaluates the curriculum at the course units;
d) establishes the assessment methods of students's training in accordance with the Regulation on the assessment of student learning activity, approved by the Senate of the USARB, and academic results of students in university;
e) develops self-evaluation reports;
f) performs the calculation of the department/chair's didactic workload in accordance with the regulations in force, the assignment of classes, the planning of other forms of didactic, scientific and educational activity and monitors the fulfillment of the individual plans of the members of the department/chair;
g) proposes the composition of the commissions for the final examinations;
h) analyzes and approves requests for the recognition or equivalence of studies / credits for the specialties and subjects it coordinates;
i) plans, coordinates and evaluates the work of the teaching staff and research staff in the department/chair;
j) monitors the performance by the teaching staff and research staff of the obligations stipulated in the job positions and the individual job descriptions;
k) proposes didactic and research positions for public competition;
l) participates in the competitions for filling the teaching and research vacant positions;
m) proposes part-time teaching staff and endorses requests for the prolongation of activity beyond the retirement age;
n) coordinates the research work of the department/chair and organizes scientific events, including with the participation of students;
o) coordinates the doctoral training activity in the field of competence;
p) evaluates and endorses the didactic materials, scientific papers and other materials elaborated by the members of the department/chair;
q) uses the material and financial resources made available, in compliance with the legal provisions;
r) initiates and participates in actions to obtain additional funds and resources;
s) proposes the establishment of cooperation agreements with partners from the country or

abroad;

t) initiates and conducts cultural and artistic activities, competitions, cenacles, etc. in collaboration with the students' self-governing bodies and with the Scientific Library;
u) draws up the annual activity report;
v) proposes sanctions and provides rewards for staff at the department/chair.

The laboratory

The laboratory is a subdivision of the faculty or department/chair, which aims at ensuring that practical and research work is carried out at one or more course units (subjects) according to the educational plans, the scientific research plans. Within the Faculty of Law and Social Sciences there can operate autonomous laboratories in the organizational form of a public institution, non-governmental organization, which operates on the basis of its own Statute and the Regulation approved by the Faculty Council. The Faculty of Law and Social Sciences may establish, reorganize, by decision of the Faculty Council and with the approval of the Senate of the University, scientific-teaching laboratories subordinated to the faculty. Within the Faculty there are 3 laboratories subordinated to the faculty: Forensic Laboratory; Laboratory of scientific research in the field of comparative law; Laboratory of European Studies, Applied Sociology and Regional Policies, and an autonomous Laboratory of Legal Practice I.P. "The University Legal Clinic" from Balti, a non-governmental organization.

Faculty management

The supreme management body of the faculty is the Faculty Council, which is elected for a five-year term in accordance with the regulations in force. The Faculty Council includes didactic-scientific staff and students. The Department of Private Law, the Department of Public Law and the Department of Social and Human Sciences and Social Assistance are represented in the Council under the principle of equality of rights. The Faculty Council has the following composition: the dean, the vice-deans, the heads of the departments/chairs, the Chairmen of the Faculty's Teaching and Student Union Committees, as well as the representatives of the departments/chairs, and also students in the amount of 15% of the total staff of the Council. The chairman of the Faculty Council is the dean, and the vice chairman - a vice-dean. Secretarial and organizational activities regarding the meetings of the Faculty Council shall be assigned to the Secretary of the Council, elected by open vote from among its members. The Faculty Council meets in regular sessions not less than once every two months according to the activity plan established at the beginning of each academic year and in extraordinary sessions at the convocation of the Dean, of the Office of the Faculty Council, or upon the request of at least 1 / 3 of the number of Council members. In order to coordinate the activities of the departments/chairs and to prepare the meetings of the Faculty Council, specialized committees are established from among members of the Council.

The fields of activity in which specialized committees are formed, their names, the number of members and the composition of the specialized committees shall be established by the Faculty Council. Within the faculty, the following specialized committees are operational: Committee for Quality Evaluation; Committee for Scientific Activity and International Relations; Committee for Teaching Activities; Committee for the University's Image. The Faculty Council has the following tasks:

a) determines the development strategy of the faculty;
b) proposes the structure of the Faculty for approval to the USARB's Senate;
c) proposes, in accordance with the legislation in force, candidates for the post of rector of the educational institution and the dean of the faculty;
d) examines and submits to the Senate for approval the educational plans for programmes / specialties (for Bachelor's degree studies), programmes / specializations (for Master's degree studies), curricula (syllabi) for course units;
e) analyzes the results of the students' training (the results of the sessions and internships, etc.), examines the problems regarding the movement of the student quota (promotion, rehabilitation, transfer from one form of study to another, parallel study at the second specialty);
f) proposes for approval to the USARB's Senate the specializations and programmes for Master's degree studies, cycle II;
g) approves the plans of scientific research and continuing training of the didactic-scientific staff;
h) assesses the results of the Bachelor's degree exam, defence of the master thesis and proposes them to the Senate for approval;
i) submits to the Rectorate of USARB proposals for extending the activity of teachers who are at retirement age, based on the provisions stipulated in the labor contract;
j) annually approves and proposes to the Senate confirmation the Dean's report on the didactic-scientific and educational activity of the faculty;
k) performs other duties provided by the legislation in force.

During periods between the Faculty Council's meetings, the operational management is carried out by the Office of the Faculty Council consisting of: the Dean, the vice-deans, the Scientific Secretary, heads of departments/chairs and the Secretary of the Council. The Office of the Faculty Council has the following tasks:

a. implements the decisions of the Faculty Council and makes decisions on current issues, between the meetings of the Faculty Council;
b. coordinates the conduct of Council meetings;
c. ensures the current management of the Faculty;
d. solves social problems.

The executive management of the faculty is carried out by the Dean, who is elected for a five-year term according to the regulations in force. The function of the dean is considered additional work to the basic didactic position, according to art. 104 (1) of the Labor Code. The Dean of the Faculty of Law and Social Sciences has the following duties:

a) manages the activities of the Faculty;
b) acts on behalf of the Faculty, representing it both within the institution and in relations with other legal and physical persons;
c) is directly subordinated to the rector of the educational institution and / or, by delegation, to the vice-rectors in the fields of activity;
d) conducts the meetings of the Faculty Council, the Office of the Faculty Council and ensures the execution of the adopted decisions;
e) organizes, coordinates and supervises the realization of the education and scientific

research process within the Faculty;

f) approves the individual working plans of the Heads of Departments/Chairs;
g) guides and controls the dynamics of the students' quota within the faculty;
h) oversees the activities of providing student scholarships and placements in student dormitories;
i) resolves, together with the vice-deans, the current demands of students and didactic staff within the limits of the general university law and regulations and the specific ones set by the Faculty Council.
j) coordinates within the faculty office the elaboration of the operational plan which is proposed to the council for approval;
k) elaborates, after consulting the departments/chairs, the development strategy of the faculty;
l) proposes to the rector for appointment or dismissal candidates for the position of vice-dean;
m) determines and assigns tasks among vice-deans;
n) annually submits to the Faculty Council and the Senate of the educational institution the report on the didactic-scientific and educational activity of the Faculty;
o) is responsible for organizing and carrying out the activity of the Faculty, for the compliance with the legislation in force, for the work discipline of the Faculty staff.

The Faculty of Law and Social Sciences has two positions of vice-deans who are subordinated directly to the Dean, having specific attributions delegated by order of the Dean. The position of vice-dean is considered as additional work to the basic teaching position, according to art. 104 (1) of the Labor Code. If the quota of students at the faculty is reduced to less than 800 - only one position of vice-dean will be established. For part-time education, the position of vice-dean is offered if the number of students exceeds 500. As a dean, people with scientific and didactic titles can usually work. Vice-deans are appointed and dismissed by order of the rector on the basis of the proposal of the dean of the faculty. The Scientific Secretary performs the tasks assigned to him/her by the Dean and ensures the statutory functioning of the Council and the Office of the Faculty. The Scientific Secretary has the following duties:

a) collaborates with the Vice-Rector for Scientific Research and with the Research Department of the State University „Alecu Russo" of Balti;
b) coordinates the relation with the Department of International Relations of the University;
c) coordinates the annual organization of the scientific conference of the Faculty and of the Students;
d) coordinates the organization of summer schools;
e) coordinates the relation with the Library, including book purchases;
f) participates in the organization of the Office and Council meetings.

3.5 STUDY BOARD LEVEL

At the USARB, the Study Board is represented by the Department of Quality Management (DQM), which has a slightly different role from that of the Study Boards in the countries analyzed in Work Package 2. The Mission of the Department of Quality Management is to create a Quality

Management System (QMS) based on a policy, organizational structure and procedures that allow to control, evaluate / audit and continuously improve the quality of all activities at the State University „Alecu Russo" of Balti. The Department of Quality Management is a coordination and execution structure that supports the *Commission for Education, Evaluation and Quality Assurance* in the achievement of quality management in the USARB by planning actions, organizing working teams for document preparation, training staff on quality assurance and managing QMS documents. The main directions of action of the Department of Quality Management are:

- Design and implementation of a quality management system leading to the continuous improvement of the teaching process at the university;
- Planning and coordinating periodic evaluation activities at the university through internal audits;
- Provides expert advice;
- Organizes training programmes and other quality management dissemination actions in order to develop a quality culture in the university;
- Elaboration of evaluation procedures for didactic staff;
- Elaboration of evaluation procedures by students of the activities (in particular didactic activities) of the university;
- Design and implementation of evaluation procedures for scientific research activities in the university (in collaboration with the Department for Scientific Activity and International Relations);
- Elaboration of evaluation procedures for undergraduate and postgraduate specializations through internal audits.

USARB'S policy in the field of quality

The State University „Alecu Russo" of Balti tends to become a national leader in the offer of educational services accredited in the field of training of specialists at the level of bachelor and master's degree, carrying out scientific researches, consultancy and continuous professional training. The policy of the State University „Alecu Russo" of Balti in the field of quality management is oriented towards the continuous assurance of clients with services at the level of European standards and the continuous improvement of service quality based on feedback from clients, suppliers and employees. The main objective of the university is to train competent specialists who will work in a knowledge-based economy. University education is seen as a stage in lifelong learning, an integral process of acquiring skills, initiation in scientific research and socialization of the personality. To achieve this goal the university tends to:

1. Systematically monitor the requirements of training institutions and the labor market.
2. Forecast the requirements of the market for educational services, intellectual activities and scientific production and to react appropriately and timely to them.
3. Continuously develop and improve the University's Quality Management System.
4. Improve the structure and technology of qualitative training of specialists through:
   - alternating theoretical training and internships;
   - diversification of training programmes;

- intensifying research activity, maintaining and developing science schools as the basis for training high-skilled staff;
- ensuring the accessibility and mobility of training programs through the use of modern educational technologies, distance learning, improvement of students' independent forms of work;
- improving the training system based on cycles, studying of information technologies and foreign languages by students;
- the support of talented young people;
- developing the internal communication system;
- competency-based approach to the training process;
- optimizing the organization of the training process and its methodical assurance activity;
- improving the informational assurance of the training process;
- developing the technical-material basis of the training and scientific research process;
- developing educational programmes.

5. Studying and implementing good practice in training.
6. Developing partnership relations with training and education providers at all levels, with other suppliers and clients.
7. Systematic self-evaluation of the possibilities and results of meeting the requirements of internal and external clients.
8. Continuous improvement of employees' professionalism (qualification, competence, including in the field of quality management).
9. Creating the conditions for productive and creative activity.

In order to achieve the quality policy, the university implements the Quality Management System based on the requirements and recommendations of the standards in the ISO 9001: 2008 series.

When making managerial decisions in the university, the following priorities are considered: (a) satisfaction of the beneficiaries; (b) staff competence; (c) corporate culture; (d) top technologies; (e) optimizing expenditure; (f) health and safety. The design, implementation and maintenance of the effective functioning of the Quality Management System, which covers all aspects of university and staff activity, is geared towards the implementation of this policy. The employees of the State University „Alecu Russo" of Balti are competent persons in the fields of activity entrusted and make efforts towards the recognition of the university as a leader on the market of educational services. The management of the university contributes in all ways to the achievement of the quality policy and takes the obligation to support the efforts of the employees in this direction and to ensure the respective activities with the necessary resources. The quality policy of the State University „Alecu Russo" of Balti is approved at all levels of university management and is aimed at confirming that the services offered by the university meet the requirements of the clients and exceed their expectations.

3.6 INTEGRATION OF DISADVANTAGED STUDENTS

Unfortunately, there are no specialized subdivisions for people with disabilities such as those at AAU and UOG, but the University is taking important steps to create the physical environment and adapt to their needs and to create the right conditions for their full and equal participation in the education process.

Annually, people with disabilities are registered at the 15 percent quota of the total number of study places provided in the matriculation plan with budgetary financing. Students with disabilities benefit from social scholarships, according to the legal provisions in force. Similarly, the state guarantees the placement of graduates of higher education institutions with budgetary funding who have disabilities.

The right to education can not be restricted because of difficulties in learning or other difficulties caused by certain disabilities. USARB ensures people with disabilities with the necessary conditions for education, training, professional training, vocational training and lifelong learning, without discrimination and on an equal basis with other students. USARB provides access for people with disabilities to education in order to get a degree in higher education tailored to individual needs, in line with the individual rehabilitation and social inclusion programme. In this context, the following measures have been taken:

a) the reasonable adaptation of learning conditions to the individual needs of people with disabilities;
b) conditions for the development and promotion of an inclusive education system;
c) endowment of the educational spaces with the equipment necessary to support and favor the inclusive education of people with disabilities.

3.7 PHYSICAL ENVIRONMENT

USARB provides a physical environment favourable to the achievement of the objectives and mission of a higher education institution, which is mainly composed of the following buildings:

USARB's study blocks

Block Nr.	1	2	3	4	5	6	8
Built in	1940	1940	1964	2001-2003	2002	1935/1965	1965
Commissioned in	1940	1940	1964	2003	2002	1935/1965	1965
Address	Puşkin 36-38	Puşkin 36-38	Puşkin 36-38	Puşkin 36-38	Puşkin 36-38	Puşkin 36-38	Puşkin 43
Total area	291,8	1763,1	4931,3	2942,7	7018,6	4396,8	1553,1
Height (nr. of floors)	3	2	4	5	5	¾	4
Basement	Semi-basement	Basement	Semi-basement	Basement	Basement	Semi-basement l	N/A
Number of rooms	74	45	81	78	129	45/46	64

Address of objects within the USARB's accommodation infrastructure

Dormitory Nr.	Address
1	Meridiane – str. Ştefan cel Mare 20
2	Integrala – str. Puşkin 40
3	Olimp – str. Coşbuc 21
4	Romantica – str. Coşbuc 23
5	Luceafărul – str. Coşbuc 21"A"
6	Luceafărul vechi – str. Decebal 121 "A"
7	ABC – str. Decebal 121 "B"

The total area within the dormitories with residential destination and the actual number of places

Dormitory nr.	Total area	Residential area	Area of public places	Number of places	Sanitary norm	Congestion norm
1	2021,5	1007,4	596,5	238	6	4,24
2	1520	1071,8	448,2	207	6	5,18
3	2769	1160,9	790,8	236	6	4,92
4	2215,3	1401,5	714,9	295	6	4,75
5	2410,8	994,5	985	175	6	5,69
6	5702,8	2400,52	2323,78	-	-	-
7	6506,6	2493,3	2134,3	-	-	-

The Scientific Library occupies a special place within the physical environment of the USARB.

The Scientific Library is an integral part of the National Libraries System, which is primarily in the service of students, teachers, researchers and other users in Balti municipality and the northern part of Moldova.

Focusing on the user is a priority side to ensure the quality and competitiveness of the institution. The USARB Library is a hybrid library that combines traditional and computerized activity, and has a strategic role in the Information and Knowledge Society. The innovative dimension added to the traditional dimension of the Library, driven by the impact produced by new information technologies. Thus, among the first institutions in the Republic, the Library began to use information technologies, and the first Internet connection from USARB was found at the Library. The library collects for its funds not only traditional publications (books, magazines/journals, newspapers), but also cards, micro-cards, films, AV materials, cassettes, CDs, DVDs, etc.

Ranked by the Government in the superior category, the USARB's Scientific Library is the Librarianship Center, the World Bank Regional Depositary, member of the REM Consortium (Electronic Resources for Moldova), TinLib, participant in the SIBIMOL National Projects and the Memory of Moldova.

The USARB's Scientific Library is dynamic, open and flexible - one of the major academic structures without which the training and scientific research process could not be carried out.

By evaluating the information services provided, the USARB's Scientific Library has introduced fees for additional services and services for non-specific users. This decision has improved the quality of service, based on the use of modern information technologies and responded to the need for quality information.

The building of the Library, which was put into operation in 1986, is set on 4 levels, endowed with 4 loan rooms and 12 reading halls, media library and other subdivisions that can offer at the same time - 763 seats.

The Library annually serves about 10,000 to 11,000 users, who visit it over 500,000 times and borrow more than 1 million documents. Users perform over two million visits to the Library website.

The Library's collections are developed and organized depending on users' information needs through generous acquisitions, donations, national and international inter-library exchange, projects, legal deposit. They are structured in subdivisions on science fields, including periodicals, the access to the shelves in reading hall being opened, thus ensuring the proximity of documentary resources to users. The collection of documents consists of printed and electronic papers edited in the Republic of Moldova and abroad in various fields in 57 languages. The library has a fund of **1 023 311** documents in **285 414** titles worth **9 580 760,48** MDL.

As a result of the cooperation relationships maintained by the Library, the collections are complemented by new documents from the UN, World Bank, European Union Information Center, Romanian Cultural Institute, Goethe Institute - Bucharest, as well as 21 other partners in the country and abroad : Romania, Switzerland, the USA, the United Kingdom, the Ukraine, Russia, France, Lithuania. About 26 investment, research / development and organizational projects have been carried out over the last 20 years. During this period, donations grew, accounting for 80-90% of annual purchases. Among the long-standing projects we can mention the CD of the UN, the NATO Documentation and Information Point, the EU Information Center (EUI), the collections of the Romanian Cultural Institute, the Pro Basarabia and Bucovina Association, the Branch of „C. Negri" Galaţi, JDP Project - Collection of scientific journals in English, GOETHE Institute Collections - Bucharest, WILHELMI, AGEPI, IOAN NICORICI Collection.

The analysis of the library's operating environment allows some generalizations: for the harmonious integration into the country's information infrastructure and active participation in the creation of the information space at national and international level it is necessary to stimulate the demand for library services and to remove obstacles in the development of promotion. The activity of the library is carried out in relation to the global trends inherent to the advanced information markets, for which priority is given to: diversification, personification and convergence of information services.

Internet access is provided throughout the campus. The study halls are equipped with technical means of training (computers, videoprojectors, etc.). The e-learning portal www.elearning.usarb.md is organized in the State University "Alecu Russo" of Balti, which includes:

- Learning management system - Moodle learning platform;
- The LAMS learning management system;

- The Mahara e-Portfolio Platform;
- The application OpenMeetings for video conferencing;
- Cmap Tools application for conceptual maps design;
- The application for the elaboration and publication of the questionnaires LimeSurvey;
- A server for placing multimedia content Media Google.

At the level of the ICT equipment assurance of the didactic process, there is:

- A laboratory, equipped with 16 computers for developing online courses;
- Educational assessment center, equipped with 30 computers to promote computerized testing;
- Classroom with interactive whiteboard to promote lectures;
- Laboratory with interactive whiteboard and 30 computers to promote practical lessons;
- Lecture halls endowed with interactive whiteboards;

3.8 STUDY PROGRAM LEVEL

3.8.1 Elaboration of the educational plans

3.8.1.1 General regulatory framework

According to the provisions of Article 79 paragraph 1 of the Education Code of the Republic of Moldova, ”higher education institutions have the status of university autonomy”, which allows to ”develop educational plans and analytical programs according to the state educational standards” (Article 79, paragraph 3, letter c).

According to art. 96 state educational standards in higher education are organized and carried out on the basis of content standards, competence standards, national reference standards and accreditation standards, being developed by professional training areas by the Ministry of Education and the National Agency for Quality Assurance in Professional Education and approved by the Government.

Thus, by the Decision of the College of the Ministry of Education no. 4.1 of 22 October 2015 and the Order of the Minister of Education no. 1045 of October 29, 2015 the Framework Plan for Higher Education was approved (Cycle I - Bachelor, Cycle II - Master, Integrated Studies, Cycle III - Doctorate), approved by Order of the Ministry of Education no. 1045 of October 29, 2015, which established the state educational standards regarding the content and competences that need to be implemented in the elaboration or updating of the educational plans.

According to p. 57 of the nominated document, the *educational plan* will be elaborated in accordance with the learning outcomes expressed in the generic and specific competences, provided in the National Qualifications Framework by fields of professional training / research fields / study programmes. These will be stipulated in the Explanatory Notes attached to the educational plan.

3.8.1.2 Stages of elaboration and approval of the educational plans

The process of developing and approving an educational plan for a new study programme involves the following steps:

a. ***Initiation of the elaboration of the new study programme*** can be started by anyone or an interested group within the faculty or department. In this respect, at the proposal of the head of the department, the dean of the faculty issues a provision nominating the persons who will be part of the working group for the elaboration of the educational plan, including full time staff from the department, representatives of the students and the employers. The designated working group develops the draft of the educational plan, indicating the course units / modules according to the logigram of the National Qualifications Framework for the field of professional training and in accordance with the provisions of the framework plan. They also outline the list of scientific and teaching staff with competences in the field, to be discussed in the faculty council. Following the endorsement of the program, the educational plan and the staff of the new study programme will be drawn up.

b. ***Approval of the study programme.*** The draft of the educational plan is discussed and approved by the Department, the Faculty Council, then the study programme's documents are submitted for approval to the University Senate. Final decision on initiation / closure of study programmes, according to article 104, paragraph 1, letter e) of the Education Code is made by the vote of at least 2/3 of the members by the Council for Institutional Strategic Development.

c. After the final approval, the faculty management designates the team ***to develop the self-evaluation report*** of the new study programme ***in order to obtain provisional authorization***.

   The self-evaluation report shall be submitted to the vice-rector for the teaching activity, to be verified by a commission designated by the sub-division responsible for quality management. According to the Quality Management System Manual in the USARB[3] responsible for the quality of design, elaboration and implementation of the educational plans are the *faculty's programme committees*, whose opinion on the study programmes is submitted together with the documents and the self-evaluation report to the Quality Council of the USARB.

d. After the correction of any deficiencies, the *self-evaluation report*, the educational plan implicitly, is submitted, at least 6 months before the start of the study programme, to the Ministry of Education, which, after coordinating the educational plan, sends it to the National Agency for Quality Assurance in Professional Education for conducting the external evaluation for provisional authorization.

   The draft educational plans for all cycles are elaborated for each study programme and form of organization of education (full time, part time), are drafted in Romanian, in two / three copies, being recommended to approve the educational plans by the ministries which have under their responsibility higher education institutions or, as the case may be, professional associations.

[3] Manualul sistemului de management al calității în USARB[3]. COD MC-USARB-01. Standard de referință: SR EN ISO 9001:2008. Ediția: 2; Revizia:3 din 22.06.2016, pag.47.

3.8.1.3 Updating and keeping track of the educational plans

The educational plan is reviewed and, as necessary, updated. Every year, in May, questioning programme students and graduates is organized to determine the strengths and weaknesses of the programme. The responsible for the programme monitors the administration of the questionnaires.

For this purpose, questionnaires are developed for students of the first cycle, Bachelor, who can express their opinion after hearing the courses. Questioning is done under anonymous conditions.

In order to improve the educational plan, cooperation agreements are concluded with faculties / universities in the country and abroad, with public administration authorities and specialized public organizations. Within these partnerships, emphasis is put on the efficiency, standardization and adaptation of the educational plan to the current needs of reforming the public authorities system in the Republic of Moldova.

Following the analysis of the questionnaires and as a result of the proposals submitted by the academic environment of other universities and officials from the administrative system, as well as those submitted by the teachers involved in this study programme, the educational plan is updated, by introducing optional courses / new modules, the number of ECTS credits at disciplines being reviewed and their breakdown by semesters being performed.

Modification of the educational plan is made by the responsible department and approved by the faculty council. Revision / updating of the educational plans is validated by the USARB Senate and submitted to the Ministry of Education every 5 years for coordination.

Study programmes that have lost relevance to the labor market, do not meet the accreditation criteria or cause undue expenditure to the institution may be closed by the decision of the Council for Institutional Strategic Development according to the provisions of art. 104 paragraph (e) of the Education Code, after the approval of the Ministry of Education and, as the case may be, of the competent ministry.

The educational plans, coordinated with the Ministry of Education, are registered in the Department responsible for higher education. The registration number and approval date will be entered on the title sheet of the plan and entered into a record registry. Educational plans are recorded with the date of their coordination.

A copy of the educational plan, coordinated and registered, is kept in the Department responsible for higher education of the Ministry of Education, another copy is kept at the responsible educational institution and, as the case may be, the third copy - at the relevant ministry.

3.8.2 Educational plan of the specialty 313.1. Public Administration

3.8.2.1 Overview

The educational plan of the specialty 313.1 *Public administration* is the document that includes a system of professional training and scientific research activities of specialists in the field of public administration. The title obtained at the end of the first cycle, undergraduate studies is *Bachelor in political science*.

The educational plan has been developed in accordance with the provisions of the:

1. Education Code of the Republic of Moldova, no. 152 of July 17, 2014;
2. Law on the Approval of the Nomenclature of Professional Training Areas and of Specializations for the Training of the Staff in Higher Education Institutions, Cycle I, no. 142-XVI of July 7, 2005;
3. Law on the approval of the Unique Classifier of Civil Servants Positions, no.155 of 21.07.2011;
4. Framework plan for higher education (cycle I - Bachelor, cycle II - Master, integrated studies, cycle III - Doctorate), approved by Order of the Ministry of Education no. 1045 of October 29, 2015;
5. Regulation for the organization of studies in higher education based on the National Credit Transfer System, approved by Order of the Ministry of Education no. 1046 of October 29, 2015.

The aim of the programme is to train qualified specialists in the field of professional training 313 Public administration, specialty 313.1 Public administration, competent to solve specialized problems at national and European level, providing them with the knowledge and skills necessary for undertaking a career in the public administration.

The distinctive features of the programme are to ensure high-quality professional training for all who want to build a career in central and local government structures, as well as in specialized departments within public companies. Professional training is focused on the acquisition of: the scientific and normative foundations of the theory of constitution; the general principles of the political system and the various management mechanisms; developing skills and training practical skills in public administration.

Graduates of the first cycle, undergraduate studies (Bachelor's degree studies), specialty Public Administration, can then act as civil servants in performing the following positions; specialist in organizing administrative activity; specialist in human resources; public relations specialist; specialist in organizing and delivering public services; specialist in administrative documentation; project manager in public administration; counselor in public administration; administrative officer; expert in public administration.

Initial training at the first cycle, undergraduate studies (Bachelor's degree studies), is a prerequisite for further studies in the second cycle, Master's degree studies, in the field of *31 Political Science* or *38 Law*.

The educational plan aims at achieving a student-centered education oriented towards acquiring the *learning outcomes* and *training competences* provided by the National Qualifications Framework by emphasizing the pragmatic character of the formative content of the course units included in the plan.

a. Learning outcomes

At the end of the programme the graduate will be able to:

- have the knowledge and skills necessary to start a professional career according to the qualification;

- carry out managerial activities specific to the field of professional training;
- act in a team spirit in the context of administrative decision making;
- develop capacities to investigate administrative acts and procedures; the language of the public administration;
- analyze the realities of the administrative environment in order to elaborate and implement the managerial strategies;
- develop communication, motivation and involvement skills for future specialists in public administration.

b. Competences trained based on the study programme:

Professional competences **Level descriptors of the structural elements of professional competences**	**PC1** Operating with the notions, concepts, theories and basic methods of the science of administration in the professional activity.	**PC2** Interpretation of the fundamental principles of organization and functioning of administrative structures for the purpose of their subsequent transposition into professional activity in public and / or private institutions	**PC3** Identifying, analyzing and solving problems in the field of public administration in accordance with the legal provisions, in a cooperative, flexible and efficient way	**PC4** Drafting, reviewing and adopting decisions on administrative work.	**PC5** Strategic planning of current professional and staff work, with a view to institutional developing on medium and perspective term.	**PC6** The use of modern technologies, the various forms and methods of control of the evaluation of the administrative activity and the formulation of proposals for its efficiency.
KNOWLEDGE						
1. Knowledge, understanding of the concepts, theories and basic methods of the domain and of the specialization area; their	**PC1.1** Knowledge, understanding and use of notions, concepts, theories of public administration	**PC2.1** Explaining and perceiving the fundamental principles of organization and functioning	**PC3.1** Identifying, understanding and efficient use of public administration methods for the purpose of legally	**PC4.1** Knowing the requirements of developing administrative decision drafts for various	**PC5.1** Distinguishing the fundamental strategies of planning current professional and staff activities in	**PC6.1** Perceiving the necessity of applying modern technologies in the activity of public administration

proper use in professional communication		of administrative structures	enforcing the state of affairs	factual situations	the field of public administration	
2. Using basic knowledge to explain and interpret various types of concepts, situations, processes, drafts, etc. associated with the domain	**PC1.2** Using the knowledge acquired in the core disciplines to explain and interpret concepts and processes in public administration	**PC2.2** Interpretation of various administrative models in order to solve typical problems in the field of public administration	**PC3.2** Legal analysis and assignment of situation solving and modeling of processes in the sphere of public administration	**PC4.2** Using the criteria and requirements for the development of draft administrative decisions for various factual situations	**PC5.2** Knowledge of the core strategies of planning of mid-term professional and staff activity in public administration	**PC6.2** Identifying the forms and methods of control of the administrative activity evaluation
ABILITIES						
3. Applying basic principles and methods for solving well-defined problems / situations, typical of the field under qualified assistance	**PC1.3** Applying the basic methods for solving the actual situations in the professional training process	**PC2.3** Reporting the fundamental principles for solving the concrete situations relevant to the public administration	**PC3.3** Applying the legal norms to identify solutions for modeled actual situations in the field of public administration	**PC4.3** Implementation of the methodological principles of decision making in the administrative field under conditions of qualified assistance	**PC5.3** Applying the principles and methods for identifying strategies for planning professional and staffing activities in public administration	**PC6.3** Applying different mechanisms and forms of administrative control related to the professional field
4. Appropriate use of criteria and standard evaluation methods to assess the quality of processes, programs, drafts,	**PC1.4** Appropriate use of standard criteria and methods of evaluation, applied in the core disciplines, for the	**PC2.4** Appropriate application of fundamental principles for the quantitative and qualitative assessment	**PC3.4** Use of standard evaluation criteria and methods to assess the effectiveness of solutions for modeled actual	**PC4.4** Analysis of draft administrative decisions to assess their legality	**PC5.4** Use of various criteria and standard evaluation methods to estimate the need for planning of professional	**PC6.4** Appropriate use of modern technologies in public administration to assess the effectiveness of governance

concepts, methods and theories	recognition and estimation of problems in the field of public administration	of public administration processes	situations in administration		and staff activities	
5. Developing professional projects with the use of established principles and methods in the field	**PC1.5** Drawing up projects in the field of public administration using the principles and methods established by the fundamental disciplines	**PC2.5** The drafting of specific public administration projects using the principles and methods established by the specialized disciplines	**PC3.5** Drafting proposals for changing and amending legislation in the field of public administration	**PC4.5** Elaboration of draft administrative decisions for concrete situations and anticipation of the expected effects	**PC5.5** Developing an institutional managerial plan	**PC6.5** Elaboration of public administration e-transformation projects
Minimum performance standards for competence assessment :	Defining notions, interpreting concepts and theories, and applying them in typical public administration situations.	Solving of cases of medium complexity requiring modeling and simulation of processes and phenomena specific to public administration	Legal framing of modeled situations specific to public administration	Drafting decisional projects in the field of public administration	Designing a strategic management plan in the field of public administration	Knowledge of standard requirements for modern communication technologies in public administration
Level descriptors of transversal competences	**Transversal competences**			**Minimum performance standards for competence assessment**		
6. Responsible carrying out of	**TC1** Rigorous, efficient, responsible and timely execution of professional tasks in a spirit of			Developing and defending, within the course units, of the planned projects, the		

professional tasks under restricted autnomy and qualified assistance	initiative and in accordance with ethical principles and professional ethics.	year theses, the bachelor thesis according to the methodical rigors
7. Familiarizing with the roles and activities specific to teamwork and the distribution of tasks for the subordinate levels	**TC2** Applying group networking techniques, learning and exercising specific roles in teamwork, developing interpersonal communication skills, and taking responsibility for decision-making.	Performing of medium complexity group projects / tasks, focusing on current and relevant training issues, requiring interdisciplinary approach and enabling to develop team spirit, planning of group activity, distribution of roles in a team, diversity in cooperation, high level of study
8. Awareness of the need for continuous training; the efficient use of learning resources and techniques for personal and professional development	**TC3** Self-evaluation of the need for professional training and identification of resources and modalities of personal and professional development, in order to integrate and adapt to the requirements of the labor market.	Identifying the need for continuous personal and professional development in accordance with the needs of the labor market and the use of various learning resources and techniques in this respect.

3.8.2.2 Structure of the educational plan

The educational plan for the *specialty 313.1 Public administration* includes the following parts:

a) the title sheet;
b) academic calendar;
c) plan of the study process per semesters / years of study;
d) internships;
e) final evaluation forms at the course units / modules offered;
f) the final evaluation form of the study programme;
g) list of free choice course units;
h) the matrix of the correlation of the study program's final outcomes with those of the course units / modules.

The educational plan is accompanied by an *Explanatory Note* describing the profile of the specialty / field of professional training / general field of study, concretized in the *concept of training of the specialist* (purpose, characteristics, employability, further training, pedagogical approaches, key competences developed in the program) and expected *learning outcomes*. In the same context, the Explanatory Note presents information on: the degree of novelty, the relevance, the correspondence of the objectives of the institutional development strategy program, the consultation of the partners (employers, graduates, teachers, students) and the coordination of the process of elaborating the programme according to the quality assurance standards.

Methods and evaluation criteria, rules on academic promotion will also be indicated.

3.8.2.3 Components of the educational plan

The educational plan includes four defining components: *temporal, formative, accumulation, evaluation*.

A. Temporal component - represents the time planning of the training process (week, semester, year, cycle), the main measurement unit of the training process being ECTS study credit.

The temporal component of the educational plan is represented by the *academic calendar*, which includes the distribution of teaching activities by years, semesters (sessions in the case of part time studies), with the setting of terms and duration of semesters, internships, examination sessions, final assessment (Bachelor's degree examination) and holidays.

The European Credit Transfer System (ECTS) is applied in the higher education system. Study credits are allocated as follows: for an academic semester - **30 transferable study credits**; for an academic year - **60 transferable study credits**.

A study credit represents 30 hours of learning activity, in all its aspects (didactic, research, audience (contact) and individual activity) required from the student to achieve the learning outcomes.

In the national higher education system, the annual workload of the student (hours of classroom and individual work) is about **1800 hours**.

For part time and distance learning, the total number of credits is allocated proportionally over the years of study.

The duration of the study week in **the first cycle, Bachelor**, is 5 days, with a weekly number of **25-30 hours** of direct contact.

In accordance with the requirements of the Framework Plan for Higher Education (cycle I - Bachelor, cycle II - Master, integrated studies, cycle III - Doctorate), approved by Order of the Ministry of Education no. 1045 of October 29, 2015, for the specialty 313.1 Public administration, the duration of the Bachelor's degree studies (cycle I), *full time education* is 3 years and 180 ECTS credits respectively.

The year of study is divided into two semesters of 15 weeks each. The total number of study hours foreseen in the plan - 5400, of which: direct contact hours - 2700; the number of independent working hours - 2700, which is equivalent to 180 credits.

The duration of the Bachelor's degree studies (cycle I), *part-time education* is 4 years (one year more than in the case of the full-time education) and 180 ECTS credits respectively.

The academic year is divided into two semesters. One semester (except the last one) consists of 2 sessions:

- a teaching-learning session of 3 (initially, in the first year - 4) weeks of study, 6 days each, with a weekly number of up to 46 hours of direct contact and 1 week of evaluation, to be completed by one week of reexamination session.

- 3 weeks of winter vacation, 8 weeks of summer vacation and 1 week of spring vacation. Semester VIII includes the research and documentary investigation internship, research, experimentation, drafting, elaboration of the presentation, public defence of the Bachelor thesis.

The total number of study hours foreseen in the plan - 5400, of which: direct contact hours - 1368; the number of independent working hours - 4032, which is equivalent to 180 credits. For *part-time education*, the co-relation of hours is: direct contact - 20%, and independent work - 80%.

B. Formative component - represents the distribution of content units (course unit, course packages, modules).

The educational plan includes the set of course units / modules distributed over semesters / years of study. Depending on the compulsory degree and possibility of choice, course units / modules are classified as *mandatory; optional; free choice*.

Depending on the *function* in the initial professional training through general competences and specific competences, the course units / modules offered will be grouped into:

a) ***Fundamental*** component (**code F**) - represents a basic component, developed and adapted to the fields of professional training, which aims to accumulate knowledge and train basic skills, integrated into competences, allowing the scientific approach of the given field as well as the understanding and the creation of new knowledge. Core course units / modules are offered on a mandatory basis, and the recommended share of course units in the educational plan is 20-30%, which represents 36-63 ECTS credits.

b) The *component of* ***training of general skills and competences*** **(code G)** is aimed at training the skills to learn, research, analyze, expose, communicate effectively orally and in writing, including through information technologies, in the field of professional training and in various cultural contexts, the recommended share being 5-10%, which represents 9-18 ECTS credits.

   The component of training of general skills and competences is **mandatory** and will include: a course of foreign language of international circulation with application in the field of professional training, offered starting with the first year of study; a course on information communication technologies; a separate course on *Ethics and Professional Culture*; a Physical Education course for students of the first / second year, which is not quantified with credits, but whose assessment with the "admitted" mark is a prerequisite for admission to the Bachelor's degree completion exam.

c) The component of ***socio-humanist orientation*** **(code U)** aims at developing a broad horizon of legal, philosophical, political, sociological, psychological and economic

culture that would enable the future specialist to assume responsibilities in a free society and adapt operatively and efficiently to changes in society, being recommended as **optional** courses and includes 9-18 ECTS credits, which is 5-10%.

d) The ***specialty*** component **(code S)** - ensures the individual element of the professional training and represents a package of **compulsory** and **optional** course units / modules that provide the distinctive element of the professional training, based on the logic of the structure of the field in accordance with the labor market trends, thus ensuring a higher degree of relevance of studies and employability of graduates, being reserved for monospecialties between 54 and 72 ECTS credits, which is 30-40%.

The **core of the training program** includes the course units / modules in the fundamental component (code F), training general skills and competences (code G) and socio-humanist (code U), which represent the basic formative structure ***compulsory*** to train the future specialist at **cycle I**.

Each student is to set up his / her **own educational path** of professional training, from among the course units proposed proposed in the educational plan, including from the optional and free choice packages, in order to obtain a university degree. The individual path of the professional training is reflected in the Diploma Supplement, which is issued compulsorily for each graduate from higher education.

Students' **internships** are one of the mandatory forms of training of highly qualified specialists, aiming at generating generic and specific competences in a field of professional training / specialization.

Types of internships, deadlines, stages, field / branch, place are set by the higher education institution (chairs / faculties / departments) in strict accordance with the learning outcomes and the expected competences for the field of study / specialty / programme and are set in the educational plans (academic calendar / schedule of the study process).

For the educational plans in the specialty 313.1 Public administration, full-time education and part-time education, the share of credits for the course units is the following:

1. For the component of *fundamental* courses (*F*) *58 ECTS credits* are provided in the plan.
2. For the component of training of *general* skills and competences (*G*) *14 ECTS credits* are provided in the plan.
3. For the component of *socio-humanistic orientation* (*U*) *12 ECTS credits* are provided in the plan.
4. For the component of *orientation towards basic specialty* (*S*) *64 ECTS credits* are provided in the plan.
5. Specialty internship I, Specialty internship II, Research internship - *26* ECTS *credits*.
6. Defence of the Bachelor thesis - 6 *ECTS credits*.

Organization of the students' internships. The objectives of the specialty internship are to familiarize the students with the peculiarities of the specialty, to acquire the initial professional skills. The specialty internship I is promoted in semester IV, lasting 3 weeks and is credited with 180 hours, 6 credits. The specialty internship II is promoted in semester V, lasting 6 weeks, and is credited with 360 hours, 12 credits.

The research internship aims at developing the necessary practical skills and applying the theoretical knowledge to independent professional activity and conducting research, documentation and collecting information for the realization of the bachelor thesis project. The student, in agreement with the Bachelor thesis supervisor and the mentor responsible for the internship, will operationalize the content of the internship according to the research topic.

The research internship is promoted in semester VI, lasting 8 hours weekly, and is credited with 240 hours, 8 credits

In the final evaluation, the internships are appreciated with grades by a committee created by the responsible department, taking into account the reference/review of the mentor within the internship unit about the trainee's activity, the quality of the public defence of the report, the results of the performance of the individual task, and the appreciation given by the internship supervisor. The grades obtained for the internship are included in the results of the respective examination session and are taken into account when calculating the average grade of the student's academic performance.

The assessment of the Bachelor internship is done by a committee on the defence of the bachelor internship, designated by the head of the responsible department, in two stages, depending on the activity of the student in the process of elaboration of the bachelor's thesis / project and the reference of the bachelor thesis supervisor.

C. Accumulation component, which reflects the way ECTS study credits are allocated.

Quantification of course units / modules in the educational plan is performed as whole numerical values - study credits - according to the full time learning required from the student.

At the same time, the total number of hours envisaged for the study of each course unit / module is indicated in the educational plan. The standard duration of study per course unit / module is one semester. Planning the intensity of the study of the course units during the semester is done by the educational institution, based on the interdisciplinary links, as well as the fact that at the first cycle the student's weekly workload can not exceed *25-30-36 contact hours*.

The share of "*direct contact hours - individual study hours*" is determined depending on the field of professional training / master's degree programme, the learning outcomes, the specificity of the course unit / module: the degree of novelty and / or complexity and didactic-methodical assurance, being proposed by the department / chair, based on a methodology specific for each general field of study, approved by the faculty council that organizes the respective study programmes and the University Senate, then published on the web page of the higher education institution.

Credits are allocated on course units, internships, and bachelor thesis that are independently evaluated. A credit is allocated for 30 hours of study. Credits reflect the amount of work invested by the student in acquiring a course unit / module, in all aspects (lectures (courses), seminars, practical classes, laboratory work, individual studies, internships, project development, evaluation). Credits allocated to a course have values ranging from 2 to 6 credits of study. By granting credits, it is certified that for the result obtained during the evaluation the expected volume of work was achieved.

D. Evaluation component, which represents the modalities of the current and final assessment of the learning outcomes and competences obtained by the student at the course unit / module.

The types and modalities for the evaluation of the learning outcomes are:

current evaluation: test, essay, report, case study (individual or group), report on the internship, etc., being mandatory during the semester.

final evaluation: oral examination, written examination, combined examination, essay, presentation, portfolio, research thesis / project, being quantified with grades. "Accepted – rejected" marks can be used for mid-term evaluations within modules and for *Physical Education*.

Bachelor's degree examination: completion of the first cycle of studies – Bachelor's dregree studies.

For the specialty 313.1 Public administration, the educational plan provides the following types and ways of evaluating the learning outcomes:

- the current evaluation (test, essay, report, case study, project, presentations, thesis etc.). For the current evaluation information technologies are used (MOODLE learning platforms, etc.)

- the final evaluation of course units / module (oral / written examination, combined examination, computer-aided evaluation (on-line learning platforms), etc.).

The annual thesis is part of a fundamental or specialized course unit in the educational plan in semesters III-IV. The annual thesis provides the training at students of the ability to document and critically analyze information, summarize the scientific articles, analyze and complete a bibliography on a topic. The topic of the annual theses offers the possibility for the student to continue the research in the elaboration of the Bachelor thesis.

The themes of the annual theses are distributed to the students at the beginning of the third semester, and the public defence of the theses is held in the second year, the third and fourth semesters. The annual theses are defended at least one week until the beginning of the examination session in front of a commission composed of two or more didactic staff, appointed by the head of the relevant department.

The studies are completed with the bachelor's examination which is limited to the **public defence of the bachelor thesis**. The graduates who have fully complied with the provisions of the educational plan and have successfully presented the bachelor thesis in front of the commission appointed by the head of the responsible department are admitted to the defence of the bachelor thesis.

The bachelor thesis is an essential part of the student's activity assessment. It tests the skills to conceive and conduct independent research, under the tutelage of the supervisor, and to draft the research paper according to the rules of the scientific community. The purpose of the bachelor thesis is to systematize and deepen students' theoretical knowledge and practical skills as well as to develop the competence to solve methodological and research problems in accordance with the subject of the bachelor thesis and with the tasks given to the student by the scientific supervisor.

The topics of the bachelor theses are elaborated by the responsible department and are disseminated to the students during the fourth semester of studies. The topics of the bachelor thesis and the scientific supervisors are approved at the meeting of the Council of the Faculty of Law and Social Sciences.

The bachelor thesis is accompanied by the opinion of the scientific supervisor.

The public defence of the bachelor thesis takes place in front of the Bachelor Commission.

The current EDUCATIONAL PLAN FOR THE STUDY PROGRAMME "PUBLIC ADMINISTRATION"

Qualification level	Level 6 ISCED
General field of study	31 Political Science
Field of professional training	313 Public administration
Specialty	313.1 Public administration
Total number of study credits	180
Title obtained at the end of the studies	Bachelor in Political Science
Admission basis	Baccalaureate diploma or an equivalent study document; higher education diploma
Language of instruction	Romanian
Form of organization of education	Full-time education

ACADEMIC CALENDAR

Study year	Didactic activities		Examination session		Internships	Vacantions		
	sem. I	sem. II	winter	summer		winter	spring	summer
I	01.09.2016-17.12.2016	06.02.2017-27.05.2017	19.12.2016-24.12.2016 09.01.2017-28.01.2017	29.05.2017-24.06.2017	-	25.12.2016-08.01.2017 30.01.2017-04.02.2017	17.04.2017-24.04.2017	25.06.17-31.08.17
II	01.09.2017-16.12.2017	05.02.2018-26.05.2018	18.12.2017-23.12.2017 09.01.2018-27.01.2018	28.05.2018-23.06.2018	30.04.2018-26.05.2018	25.12.2017-08.01.2018; 29.01.2018-04.02.2018	17.04.2018-24.04.2018	25.06.18-31.08.18
III	03.09.2018-15.12.2018	04.02.2019-25.05.2019	17.12.2018-24.12.2018 09.01.2019-26.01.2019	27.05.2019-22.06.2019	05.11.2018-14.12.2018 04.02.2019-11.05.2019	25.12.2018-08.01.2019 28.01.2019-02.02.2019	29.04.2019-06.05.2019	

Distribution of course units / modules in educational plans by years of study

Year 1, semester 1 (15 weeks of study)

Code	Name of the course unit / module	Total hours			Number of hours by type of activity			Evaluation form	Number of credits
		Total	Direct contact	Studiu individual	Course	Seminar	Laboratory		
F.01.O.001	General theory of law	180	90	90	44	46	-	E	6
F.01.O.002	Constitutional law and political institutions	180	90	90	44	46	-	E	6
F.01.O.003	Module: 1.Theory of public administration	180	60	60	30	30	-	E	6
	2. History of public administration		30	30	16	14	-		
F.02.O.004	International public law	120	60	60	30	30	-	E	4
F.01.O.005	Politology	120	60	60	30	30	-	E	4
G.01.O.006	English / French / German I	120	60	60	-	-	60	E	4
Total hours:		**900**	**450**	**450**	**194**	**196**	**60**	**6**	**30**
					450				
G.01.O.007	Physical education I	60	30	30	-	30	-	C	

Year I, semester 2 (15 weeks of study)

Code	Name of the course unit / module	Total hours			Number of hours by type of activity			Evaluation form	Number of credits
		Total	Direct contact	Studiu individual	Course	Seminar	Laboratory		
F.02.O.008	Administrative law I	180	90	90	44	46	-	E	6
F.02.O.009	Civil law	150	75	75	45	30	-	E	5
F.02.O.010	Criminal law	120	60	60	30	30	-	E	4
F.03.O.011	Institutional law of the European Union	90	45	45	30	15	-	E	3
U.02.A.012 / U.02.A.013	European construction / European civilization	120	60	60	30	30	-	E	4
G.02.O.014	Information and communication technologies	120	60	60	14	-	46	E	4
G.02.O.015	English / French / German II	120	60	60	-	-	60	E	4
Total hours:		**900**	**450**	**450**	**193**	**151**	**106**	**7**	**30**
					450				
G.02.O.016	Physical education II	60	30	30	-	30	-	C	

Year II, semester 3 (15 weeks of study)

Code	Name of the course unit / module	Total hours			Number of hours by type of activity			Evaluation form	Number of credits
		Total	Direct contact	Studiu individual	Course	Seminar	Laboratory		
F.03.O.017	Administrative law II	180	90	90	44	46	-	E	6
F.03.O.018	Financial and fiscal law	120	60	60	30	30	-	E	4
F.03.O.019	Family law and civil status	120	60	60	30	30	-	E	4
S.03.O.120	Information law	120	60	60	30	30	-	E	4
S.04.O.121	Contravention law	120	60	60	30	30	-	E	4
S.03.A.122 / S.03.A.123	Labor Law / Labor Law of the European Union	120	60	60	30	30	-	E	4
U.01.A.024 / U.01.A.025	Philosophy. Philosophical issues of the domain / Philosophy and history of science	120	60	60	30	30	-	E	4
Total hours:		**900**	**450**	**450**	**224**	**226**	**-**	**7**	**30**
					450				

Year II, semester 4 (15 weeks of study)

Code	Name of the course unit / module	Total hours			Number of hours by type of activity			Evaluation form	Number of credits
		Total	Direct contact	Studiu individual	Course	Seminar	Laboratory		
S.04.O.126	Control of the administrative act	150	75	75	45	30	-	E	5
S.04.O.127	Civil procedural law	180	90	90	44	46	-	E	6
S.03.A.128 / S.03.A.129	Social protection law / Social protection law of the European Union	120	60	60	30	30	-	E	4
S.04.O.130	Administrative contracts	90	45	45	30	15	-	E	3
U.04.A.031 / U.04.A.032	Principles of market economy / Project management	120	60	60	30	30	-	E	4
G.04.O.033	Ethics and professional deontology	60	30	30	16	14	-	E	2
	Specialty internship I	180	90	90	-	-	-	E	6
	Total hours:	**900**	**450**	**450**	**195**	**165**	**-**	**7**	**30**
					360				

* The annual thesis is part of a fundamental or specialty course unit in the 3rd-4th semesters.

Year III, semester 5 (15 weeks of study)

Code	Name of the course unit / module	Total hours			Number of hours by type of activity			Evaluation form	Number of credits
		Total	Direct contact	Studiu individual	Course	Seminar	Laboratory		
S.05.O.134	Legal liability of the civil servant	90	45	45	30	15	-	E	3
S.05.A.135 / S.05.A.136	Public service management / Human resources management in public administration	120	60	60	30	30	-	E	4
S.05.A.137 / S.05.A.138	E-government / E-service in Public Administration	120	60	60	30	30	-	E	4
S.05.A.139 / S.05.A.140	Land law and real estate advertising / Urbanism and landscaping	120	60	60	30	30	-	E	4
S.05.A.141 / S.05.A.142	Environmental law / Customs law	90	45	45	30	15	-	E	3
	Specialty internship II	360	180	180	-	-	-	E	12
	Total hours:	**900**	**450**	**450**	**150**	**120**	**-**	**6**	**30**
					270				

Year III, semester 6 (15 weeks of study)

Code	Name of the course unit / module	Total hours			Number of hours by type of activity			Evaluation form	Number of credits
		Total	Direct contact	Studiu individual	Course	Seminar	Laboratory		
S.06.O.143	Public procurement management	120	60	60	30	30	-	E	4
S.06.O.144	Central public administration	90	45	45	30	15	-	E	3
S.06.O.145	Local public administration	90	45	45	30	15	-	E	3
S.06.O.146	Legal regulation of entrepreneurial activity	90	45	45	30	15	-	E	3
S.06.A.147 / S.06.A.148	Office supplies, correspondence and secretarial techniques/ Techniques for drawing up administrative documents	90	45	45	30	15	-	E	3
	Research internship	240	120	120	-	-	-	E	14
	Bachelor thesis	180	90	90	-	-	-	E	
Total hours:		**900**	**450**	**450**	**150**	**90**	**-**	**7**	**30**
					240				

Internships

Nr.	Internships	Sem.	Duration nr. weeks/ hours	Period	Number of credits
1.	Specialty internship I	4	3/180	30.04.2018-26.05.2018	6
2.	Specialty internship II	5	6/360	05.11.2018-14.12.2018	12
	Total				**18**

Bachelor's degree thesis

Nr.	Name of activity		Sem.	Duration nr. weeks/ hours	Period	Number of credits
1.	Elaboration and defence of the bachelor thesis: documentation, investigation, research, experimentation, drafting, presentation, public defence	Research internship	VI	13/240	04.02.2019-11.05.2019 (8 ore/săpt.)	14
		Defence of the Bachelor's degree thesis	VI	3/180	27.05.2019-22.06.2019	

Initial curriculum minimum for another domain in Cycle II – Master's Degree (at free choice)

Nr. crt.	Name of the course unit /module	Year	Semester	Total hours			Number of hours by type of activity			Evaluation form	Number of credits
				Total	Direct contact	Individual study	Course	Seminar	Laboratory		
1.	General theory of law	I	I	180	90	90	44	46	-	E	6
2.	Constitutional law and political institutions	I	I	180	90	90	44	46	-	E	6
3.	*Module:* 1. Theory of public administration	I	I	180	60	60	30	30	-	E	6
	2. History of public administration				30	30	16	14	-		

4.	Administrative law I	I	II	180	90	90	44	46	-	E	6
5.	Administrative law II	II	III	180	90	90	44	46	-	E	6
Total				**900**	**450**	**450**	**222**	**228**	**-**	**5**	**30**
							450				

Course units at free choice

Nr. crt.	Name of course unit / module	Total hours			Number of hours by type of activity			Evaluation form	Number of credits
		Total	Direct contact	Individual study	Course	Seminar	Laboratory		
1.	The bases of information culture	30	10	20	-	10	-	C	
2.	Communication culture	60	30	30	-	-	30	C	2
3.	Work safety. Civil protection	30	15	15	15	-	-	C	-
4.	Modern governance and European integration	90	45	45	30	15	-	E	3
5.	Administrative regionalization	90	45	45	30	15		E	3
6.	Legal protection of human rights	90	45	45	30	15	-	E	3
7.	Poll theory in public administration	90	45	45	30	15		E	3
9.	Management psychology	90	45	45	30	15	-	E	3
10.	Management sociology	90	45	45	30	15	-	E	3

The psycho-pedagogic module (at free choice)

Nr. crt.	Name of course unitbb/ module	Total hours			Number of hours by type of activity			Evaluation form	Number of credits
		Total	Direct contact	Individual study	Course	Seminar	Laboratory		
1.	Pedagogy	120	60	60	30	30	-	E	4
2.	Psychology	120	60	60	30	30	-	E	4
3.	Age psychology. Stress in the educational environment	150	75	75	45	30	--	E	5
4.	Tutorship. Inclusive education	150	75	75	45	30	--	E	5
5.	Didactics of administrative sciences	180	90	90	46	44	-	E	6
6.	Educational management	120	60	60	30	30	-	E	4
7.	Pedagogical ethics	60	30	30	16	14	-	E	2
8.	The practice of initiation in pedagogy *	30	15	15	-	-	15	-	1
9.	The practice of initiation in psychology **	30	15	15	-	-	15	-	1
10	Pedagogical internship	480	240	240	-	-	-	E	16
11.	Specialty internship I	120	60	60	-	-	-	E	4
12.	Specialty internship II	240	120	120	-	-	-	E	8
Total		**1800**	**900**	**900**	**242**	**208**	**30**	**10**	**60**

* is evaluated within the Pedagogy course unit

** is evaluated in the Psychology course unit

Description of the learning outcomes and competences

Professional competences:

PC1. Operating with the notions, concepts, theories and basic methods of the science of administration in the professional activity.

PC2. Interpretation of the fundamental principles of organization and functioning of administrative structures for the purpose of their subsequent transposition into professional activity in public and / or private institutions.

PC3. Identify, analyze and solve problems in the field of public administration in accordance with the legal provisions, in a cooperative, flexible and efficient way.

PC4. Drafting, reviewing and adopting decisions on administrative work.

PC5. Strategic planning of current professional and staff work, with the goal of institutional development in medium and perspective terms.

CP6. The use of modern technologies, the various forms and methods of control of the evaluation of the administrative activity and the formulation of proposals for its efficiency.

Transversal competences:

TC1. Rigorous, efficient, responsible and timely execution of professional tasks, in a spirit of initiative and in accordance with ethical principles and professional deontology.

TC2. Applying group networking techniques, learning and exercising specific roles in teamwork, by developing interpersonal communication skills, and taking responsibility for decision-making.

TC3. Self-evaluation of the need for professional training and identification of resources and modalities of personal and professional development, in order to integrate and adapt to the requirements of the labor market.

Matrix of correlations between professional and transversal competences and course units included in the educational plan

Code	Course unit	Sem.	Nr. of credits	Professional competences						Transversal competences		
				PC1	PC2	PC3	PC4	PC5	PC6	TC1	TC2	TC3
F.01.O.001	General theory of law	I	6	+	+	+				+		
F.01.O.002	Constitutional law and political institutions	I	6	+	+	+	+			+	+	
F.01.O.003	Modulw: 1.	I	6	+	+	+	+	+	+		+	

	Theory of public administration 2. History of public administration			+	+	+			+			+
F.02.O.004	International public law	I	4	+	+	+		+		+	+	
F.01.O. 005	Politology	I	4	+	+	+	+				+	
G.01.O.006	English / French / German I	I	4						+	+	+	+
F.02.O.008	Administrative law I	II	6	+	+	+	+	+		+		
F.02.O.009	Civil law	II	5	+	+	+					+	+
F.02.O.010	Criminal law	II	4	+	+	+			+	+	+	
F.02.O.011	Institutional law of the European Union	II	3	+	+	+		+		+	+	
U.02.A.012 / U.02.A.013	European construction / European civilization	II	4	+	+					+	+	
G.02.O.014	Information and communication technologies	II	4						+	+	+	+
G.02.O.015	English / French / German II	II	4						+	+	+	+
F.03.O.017	Administrative law II	III	6	+	+	+	+	+	+			+
F.03.O.018	Financial and fiscal law	III	4	+	+	+		+	+	+		
F.03.O.019	Family law and civil status	III	4	+	+	+					+	+
S.02.O.120	Information	III	4			+	+	+	+		+	+

	law											
S.03.O.121	Contraventional law	III	4	+	+	+	+			+		
S.03.A.122 / S.03.A.123	Labor law / Labor law of the European Union	III	4	+	+	+	+	+		+		+
				+	+	+	+	+		+		+
U.01.A.024 / U.01.A.025	Philosophy. Philosophical issues of the domain / Philosophy and history of science	III	4	+					+	+	+	+
				+					+	+	+	+
S.04.O.126	Control of the administrative act	IV	5			+	+	+	+	+	+	
S.04.O.127	Civil procedural law	IV	6	+	+	+	+			+		
S.04.A.128 / S.04.A.129	Social protection law / Social protection law of the European Union	IV	4	+	+	+	+	+		+		+
				+	+	+	+	+		+		+
S.05.A.130	Administrative contracts	IV	3		+				+		+	+
U.04.A.031 / U.04.A.032	Principles of market economy / Project management	IV	4	+					+	+	+	+
				+					+	+	+	+
G.04.O.033	Ethics and professional deontology	IV	2					+		+		+
S.05.O.134	Legal liability of the civil servant	V	4			+	+	+	+	+		+
S.05.A.135 /	Public service	V	4			+		+	+	+	+	+

S.05.A.136	management / Human resources management in public administration					+		+	+	+	+	+
S.04.A.137 / S.04.A.138	E-government / E-service in Public Administration	V	4				+	+	+	+	+	
							+	+	+	+	+	
S.05.A.139 / S.05.A.140	Land and real estate advertising / Urbanism and landscaping	V	4	+	+	+	+			+		
				+	+	+	+			+		
S.05.A.141 / S.05.A.142	Environmental law / Customs law	V	3	+	+	+				+		
				+	+	+				+		
S.06.A.143	Public procurement management	VI	4			+	+	+	+		+	+
S.06.A. 144	Central public administration	VI	3			+	+	+	+	+		+
S.06.O. 145	Local public administration	VI	3			+	+	+	+	+		+
S.06.O.146	Legal regulation of entrepreneurial activity	VI	3	+	+	+	+		+	+	+	+
S.06.A.147 / S.06.A.148	Office supplies, correspondence and secretarial techniques/ Techniques for drawing up administrative documents	VI	3				+	+	+		+	+
							+	+	+		+	+

EXPLANATORY NOTE

1. Overview

The educational plan of the specialty *Public administration* is the document that includes a system of professional training and scientific research activities of specialists in the field of public administration. The title obtained at the end of the first cycle, undergraduate studies is *Bachelor in political science*.

The educational plan comprises:

I. the educational plan itself;
II. the explanatory note to the educational plan.

The educational plan has been developed in accordance with the provisions of the:

1. Education Code of the Republic of Moldova, no. 152 of July 17, 2014;
2. Law on the Approval of the Nomenclature of Professional Training Areas and of Specializations for the Training of the Staff in Higher Education Institutions, Cycle I, no. 142-XVI of July 7, 2005;
3. Law on the approval of the Unique Classifier of Civil Servants Positions, no.155 of 21.07.2011;
4. Framework plan for higher education (cycle I - Bachelor, cycle II - Master, integrated studies, cycle III - Doctorate), approved by Order of the Ministry of Education no. 1045 of October 29, 2015;
5. Regulation for the organization of studies in higher education based on the National Credit Transfer System, approved by Order of the Ministry of Education no. 1046 of October 29, 2015.
6. The National Qualifications Framework of the Republic of Moldova and the National Qualifications Framework for Higher Education by Professional Training Areas, approved by Order of the Ministry of Education no. 934 of 29 December 2010.

2. Concept of specialist's training

a. Purpose and features

The aim of the programme is to train qualified specialists in the field of professional training 313 Public administration, specialty 313.1 Public administration, competent to solve specialized problems at national and European level, providing them with the knowledge and skills necessary for undertaking a career in the public administration.

The distinctive features of the programme are to ensure high-quality professional training for all who want to build a career in central and local government structures, as well as in specialized departments within public companies. Professional training is focused on the acquisition of: the scientific and normative foundations of the theory of constitution; the general principles of the political system and the various management mechanisms; developing skills and training practical skills in public administration.

b. Employability

Graduates of the first cycle, undergraduate studies (Bachelor's degree studies), specialty Public Administration, can then act as civil servants in performing the following positions; specialist in organizing administrative activity; specialist in human resources; public relations specialist; specialist in organizing and delivering public services; specialist in administrative documentation; project manager in public administration; counselor in public administration; administrative officer; expert in public administration.

c. Further training

Initial training at the first cycle, undergraduate studies (Bachelor's degree studies), is a prerequisite for further studies in the second cycle, Master's degree studies, in the field of *31 Political Science* or *38 Law*.

3. Expected learning outcomes

a. Training outcomes:

- to train civil servants able to master the specialized issues at national and European level, providing them with the knowledge and skills necessary to start a career in the given profession;
- to train specialists in the field of public administration in order to ensure the local public management;
- to train civil servants in the spirit of managerial effectiveness;
- to develop team spirit in the context of administrative decision making;
- to train public managers with leadership skills and knowledge;
- to develop capacities to investigate administrative acts and procedures;
- to develop capacities for capitalizing the specific language of public administration;
- to train skills to understand the realities of the administrative environment;
- to train analytical and synthesis capacities of socioeconomic processes and phenomena by developing and implementing managerial strategies;
- to develop communication, motivation and involvement skills for future specialists in public administration;
- to cultivate capacities on decision-making and change management in public administration;
- to strengthen the capacity to take risks and professional responsibilities;
- to develop capacities to initiate strategies for the development and diversification of activities of central and local public administration;
- to provide a body of civil servants trained in the field of human resources management;
- to cultivate collaborative skills with specialists from other fields and to act in the context of change management.

b. The outcomes of the study programme expressed through professional competencies and transversal competencies:

Professional competences **Level descriptors of the structural elements of professional competences**	**PC1** Operating with the notions, concepts, theories and basic methods of the science of administration in the professional activity.	**PC2** Interpretation of the fundamental principles of organization and functioning of administrative structures for the purpose of their subsequent transposition into professional activity in public and / or private institutions	**PC3** Identifying, analyzing and solving problems in the field of public administration in accordance with the legal provisions, in a cooperative, flexible and efficient way	**PC4** Drafting, reviewing and adopting decisions on administrative work.	**PC5** Strategic planning of current professional and staff work, with a view to institutional developing on medium and perspective term.	**PC6** The use of modern technologies, the various forms and methods of control of the evaluation of the administrative activity and the formulation of proposals for its efficiency.
KNOWLEDGE						
1. Knowledge, understanding of the concepts, theories and basic methods of the domain and of the specialization area; their proper use in professional communication	**PC1.1** Knowledge, understanding and use of notions, concepts, theories of public administration	**PC2.1** Explaining and perceiving the fundamental principles of organization and functioning of administrative structures	**PC3.1** Identifying, understanding and efficient use of public administration methods for the purpose of legally enforcing the state of affairs	**PC4.1** Knowing the requirements of developing administrative decision drafts for various factual situations	**PC5.1** Distinguishing the fundamental strategies of planning current professional and staff activities in the field of public administration	**PC6.1** Perceiving the necessity of applying modern technologies in the activity of public administration
2. Using basic knowledge to explain and interpret various types of concepts, situations, processes, drafts, etc. associated with the domain	**PC1.2** Using the knowledge acquired in the core disciplines to explain and interpret concepts and processes in public administration	**PC2.2** Interpretation of various administrative models in order to solve typical problems in the field of public administration	**PC3.2** Legal analysis and assignment of situation solving and modeling of processes in the sphere of public administration	**PC4.2** Using the criteria and requirements for the development of draft administrative decisions for various factual situations	**PC5.2** Knowledge of the core strategies of planning of mid-term professional and staff activity in public administration	**PC6.2** Identifying the forms and methods of control of the administrative activity evaluation

ABILITIES						
3. Applying basic principles and methods for solving well-defined problems / situations, typical of the field under qualified assistance	**PC1.3** Applying the basic methods for solving the actual situations in the professional training process	**PC2.3** Reporting the fundamental principles for solving the concrete situations relevant to the public administration	**PC3.3** Applying the legal norms to identify solutions for modeled actual situations in the field of public administration	**PC4.3** Implementation of the methodological principles of decision making in the administrative field under conditions of qualified assistance	**PC5.3** Applying the principles and methods for identifying strategies for planning professional and staffing activities in public administration	**PC6.3** Applying different mechanisms and forms of administrative control related to the professional field
4. Appropriate use of criteria and standard evaluation methods to assess the quality of processes, programs, drafts, concepts, methods and theories	**PC1.4** Appropriate use of standard criteria and methods of evaluation, applied in the core disciplines, for the recognition and estimation of problems in the field of public administration	**PC2.4** Appropriate application of fundamental principles for the quantitative and qualitative assessment of public administration processes	**PC3.4** Use of standard evaluation criteria and methods to assess the effectiveness of solutions for modeled actual situations in administration	**PC4.4** Analysis of draft administrative decisions to assess their legality	**PC5.4** Use of various criteria and standard evaluation methods to estimate the need for planning of professional and staff activities	**PC6.4** Appropriate use of modern technologies in public administration to assess the effectiveness of governance
5. Developing professional projects with the use of established principles and methods in the field	**PC1.5** Drawing up projects in the field of public administration using the principles and methods established by the fundamental disciplines	**PC2.5** The drafting of specific public administration projects using the principles and methods established by the specialized disciplines	**PC3.5** Drafting proposals for changing and amending legislation in the field of public administration	**PC4.5** Elaboration of draft administrative decisions for concrete situations and anticipation of the expected effects	**PC5.5** Developing an institutional managerial plan	**PC6.5** Elaboration of public administration e-transformation projects
Minimum performance standards for competence assessment :	Defining notions, interpreting concepts and theories, and applying them	Solving of cases of medium complexity requiring modeling and	Legal framing of modeled situations specific to public administration	Drafting decisional projects in the field of public administration	Designing a strategic management plan in the field of public administration	Knowledge of standard requirements for modern communication technologies in

	in typical public administration situations.	simulation of processes and phenomena specific to public administration				public administration
Level descriptors of transversal competences	**Transversal competences**			**Minimum performance standards for competence assessment**		
6. Responsible carrying out of professional tasks under restricted autnomy and qualified assistance	**TC1** Rigorous, efficient, responsible and timely execution of professional tasks in a spirit of initiative and in accordance with ethical principles and professional ethics.			Developing and defending, within the course units, of the planned projects, the year theses, the bachelor thesis according to the methodical rigors		
7. Familiarizing with the roles and activities specific to teamwork and the distribution of tasks for the subordinate levels	**TC2** Applying group networking techniques, learning and exercising specific roles in teamwork, developing interpersonal communication skills, and taking responsibility for decision-making.			Performing of medium complexity group projects / tasks, focusing on current and relevant training issues, requiring interdisciplinary approach and enabling to develop team spirit, planning of group activity, distribution of roles in a team, diversity in cooperation, high level of study		
8. Awareness of the need for continuous training; the efficient use of learning resources and techniques for personal and professional development	**TC3** Self-evaluation of the need for professional training and identification of resources and modalities of personal and professional development, in order to integrate and adapt to the requirements of the labor market.			Identifying the need for continuous personal and professional development in accordance with the needs of the labor market and the use of various learning resources and techniques in this respect.		

4. The period of studies and the structure of the years of study

In accordance with the requirements of the Framework Plan for Higher Education (cycle I - Bachelor, cycle II - Master, integrated studies, cycle III - Doctorate), approved by Order of the Ministry of Education no. 1045 of October 29, 2015, the duration of the Bachelor's degree studies (cycle I), full time education is 3 years and 180 ECTS credits respectively.

The year of study is divided into two semesters of 15 weeks each. The total number of study hours foreseen in the plan - 5400, of which: direct contact hours - 2700; the number of independent working hours - 2700, which is equivalent to 180 credits.

The share of credits of the course units in the educational plan is the following:

1. For the component of *fundamental* courses (*F*) *58 ECTS credits* are provided in the plan.
2. For the component of training of *general* skills and competences (*G*) *14 ECTS credits* are provided in the plan.
3. For the component of *socio-humanistic orientation* (*U*) *12 ECTS credits* are provided in the plan.
4. For the component of *orientation towards basic specialty* (*S*) *64 ECTS credits* are provided in the plan.
5. Specialty internship I, Specialty internship II, Research internship - *26* ECTS *credits*.
6. Defence of the Bachelor thesis - 6 *ECTS credits*.

5. The annual thesis

The annual thesis is part of a fundamental or specialized course unit in the educational plan in semesters III-IV. The annual thesis provides the training at students of the ability to document and critically analyze information, summarize the scientific articles, analyze and complete a bibliography on a topic. The topic of the annual theses offers the possibility for the student to continue the research in the elaboration of the Bachelor thesis.

The themes of the annual theses are distributed to the students at the beginning of the third semester, and the public defence of the theses is held in the second year, the third and fourth semesters. The annual theses are defended at least one week until the beginning of the examination session in front of a commission composed of two or more didactic staff, appointed by the head of the relevant department.

6. Organization of the students' internships.

The objectives of the specialty internship are to familiarize the students with the peculiarities of the specialty, to acquire the initial professional skills. The specialty internship I is promoted in semester IV, lasting 3 weeks and is credited with 180 hours, 6 credits. The specialty internship II is promoted in semester V, lasting 6 weeks, and is credited with 360 hours, 12 credits.

The research internship aims at developing the necessary practical skills and applying the theoretical knowledge to independent professional activity and conducting research, documentation and collecting information for the realization of the bachelor thesis project. The student, in agreement with the Bachelor thesis supervisor and the mentor responsible for the internship, will operationalize the content of the internship according to the research topic.

The research internship is promoted in semester VI, lasting 8 hours weekly, and is credited with 240 hours, 8 credits

In the final evaluation, the internships are appreciated with grades by a committee created by the responsible department, taking into account the reference/review of the mentor within the internship unit about the trainee's activity, the quality of the public defence of the report, the results

of the performance of the individual task, and the appreciation given by the internship supervisor. The grades obtained for the internship are included in the results of the respective examination session and are taken into account when calculating the average grade of the student's academic performance.

The assessment of the Bachelor internship is done by a committee on the defence of the bachelor internship, designated by the head of the responsible department, in two stages, depending on the activity of the student in the process of elaboration of the bachelor's thesis / project and the reference of the bachelor thesis supervisor.

7. Student evaluation

The educational plan provides the following types and ways of evaluating the learning outcomes:

- the current evaluation (test, essay, report, case study, project, presentations, thesis etc.). For the current evaluation information technologies are used (MOODLE learning platforms, etc.)
- the final evaluation of course units / module (oral / written examination, combined examination, computer-aided evaluation (on-line learning platforms), etc.).

8. Bachelor thesis

The studies are completed with the bachelor's examination which is limited to the public defence of the bachelor thesis. The graduates who have fully complied with the provisions of the educational plan and have successfully presented the bachelor thesis in front of the commission appointed by the head of the responsible department are admitted to the defence of the bachelor thesis.

The bachelor thesis is an essential part of the student's activity assessment. It tests the skills to conceive and conduct independent research, under the tutelage of the supervisor, and to draft the research paper according to the rules of the scientific community. The purpose of the bachelor thesis is to systematize and deepen students' theoretical knowledge and practical skills as well as to develop the competence to solve methodological and research problems in accordance with the subject of the bachelor thesis and with the tasks given to the student by the scientific supervisor.

The topics of the bachelor theses are elaborated by the responsible department and are disseminated to the students during the fourth semester of studies. The topics of the bachelor thesis and the scientific supervisors are approved at the meeting of the Council of the Faculty of Law and Social Sciences.

The bachelor thesis is accompanied by the opinion of the scientific supervisor.

The public defence of the bachelor thesis takes place in front of the Bachelor Commission.

9. Credits

Credits are allocated on course units, internships, and bachelor thesis that are independently evaluated. A credit is allocated for 30 hours of study. Credits reflect the amount of work invested by the student in acquiring a course unit / module, in all aspects (lectures (courses), seminars, practical classes, laboratory work, individual studies, internships, project development, evaluation).

Credits allocated to a course have values ranging from 2 to 6 credits of study. By granting credits, it is certified that for the result obtained during the evaluation the expected volume of work was achieved.

10. Specialty

The plan provides training for a mono-specialty 313.1 Public administration.

11. Updating the educational plan

The educational plan for the specialty 313.1 Public Administration is reviewed and, as necessary, updated. Every year, in May, questioning programme students and graduates is organized to determine the strengths and weaknesses of the programme. The responsible for the programme monitors the administration of the questionnaires.

For this purpose, questionnaires are developed for students of the first cycle, Bachelor, who can express their opinion after hearing the courses. Questioning is done under anonymous conditions.

In order to improve the educational plan, cooperation agreements are concluded with faculties / universities in the country and abroad, with public administration authorities and specialized public organizations. Within these partnerships, emphasis is put on the efficiency, standardization and adaptation of the educational plan to the current needs of reforming the public authorities system in the Republic of Moldova.

Following the analysis of the questionnaires and as a result of the proposals submitted by the academic environment of other universities and officials from the administrative system, as well as those submitted by the teachers involved in this study programme, the educational plan is updated, by introducing optional courses / new modules, the number of ECTS credits at disciplines being reviewed and their breakdown by semesters being performed.

Modification of the educational plan is made by the responsible department and approved by the faculty council. Revision / updating of the educational plans is validated by the USARB Senate and submitted to the Ministry of Education every 5 years for coordination.

The educational plan was approved at the meeting of the Department of Law, minutes no.10 of 03.05.2016, and the meeting of the Council of the Faculty of Law and Social Sciences, minutes no.9 of 05.05.2016.

3.9 PEDAGOGICAL TRAINING LEVEL

The continuous education of adults in the Republic of Moldova is regulated by the following normative acts:

- ✓ The Constitution of the Republic of Moldova, adopted on 29.07.1994, Article 35 - The right to education (http://lex.justice.md/index.php?action=view&view=doc&lang=1&id=363979)
- ✓ Education Code of the Republic of Moldova Nr. 152 of 17.07.2014, Title VII - Lifelong learning (http://lex.justice.md/index.php?action=view&view=doc&lang=1&id=355156)

- ✓ Decision of the Government of the Republic of Moldova Nr. 1224 of 09.11.2004 on the organization of continuous professional training (http://lex.justice.md/md/298278/)
- ✓ Decision of the Government of the Republic of Moldova Nr. 191 of 22.04.2015 on the National Agency for Quality Assurance in Professional Education (http://lex.justice.md/index.php?action=view&view=doc&lang=1&id=358167)
- ✓ Decision of the Government of the Republic of Moldova Nr. 616 of 18.05.2016 for the approval of the Methodology for external quality evaluation for provisional authorization and accreditation of study programmes and of vocational educationa and training, higher and continuous education institutions, and the Regulation for calculating the fees for services rendered in the external quality evaluation of study programmes and vocational educationa and training, higher and continuous education institutions. (http://lex.justice.md/index.php?action=view&view=doc&lang=1&id=364908)

In order to offer prospective graduates of non-pedagogical higher education programmes, who have not completed the psycho-pedagogical module and are seeking to fill teaching positions, higher education institutions may plan in *extracurricular* regime (outside basic hours) a psycho-pedagogical training module in a volume of **60 transferable study credits**, including *30 credits for theoretical training* and *30 credits for a compulsory internship*.

The theoretical training within the psycho-pedagogical module will include the following course units: *the pedagogical module*, *the psychological module* and *the didactics of the discipline*.

If the higher education institution does not have the academic subdivision responsible for the organization of the psycho-pedagogic module, students will be offered, upon request, this module at another institution, based on inter-university agreements.

The Continuing Professional Training Center (CFPC) operates within the USARB. CFPC is a specialized subdivision for continuous professional training of the USARB, being integrated into the structure of the continuous professional training system of the Republic of Moldova.

The Continuing Professional Training Center organizes and performs at the level of the northern region of RM and at republican level activities for requalification of pre-university teachers, based on the professional training plan approved annually by the Ministry of Education of the Republic of Moldova.

The Continuing Professional Training Center contributes to:

- updating and developing, through periodic training / retraining programmes, the competencies in the domain (s) corresponding to the didactical functions obtained through the initial training;
- development of competences for the evolution in the didactic career through the system of training and obtaining the didactical degrees;
- acquiring or developing leadership, guidance, control, evaluation competences in the structures and institutions of the education system;
- acquiring new skills through retraining / re-qualification programmes for new specialties or / and new teaching functions other than those obtained through initial training;
- the acquisition of complementary or extension competences that broaden the range of activities and functions that can be provided by the teaching staff, i.e. teaching in the e-learning system, educational counseling and career orientation, adult education, etc. ;

- developing and expanding transversal competences on social roles and personal and professional development, interaction and communication with the social and pedagogical environment, assuming responsibilities for organizing, leading and improving the strategic performance of professional groups, self-control and reflexive analysis of own activities etc.

For the purpose of continuous training of USARB's teaching staff in the field of ICT, a Resource Center has been created by USARB's Rector Order (No. 05-350 of 12.07.2012) that has the following tasks:

- operatively informs teaching staff about Web applications, new information technologies, their teaching potential;
- provides consultancy services to teaching staff on the use of ICT in the training process;
- examines the courses developed for the MOODLE learning platform;
- conducts training sessions on ICT use at the request of the university subdivisions;
- organizes seminars, conferences in the field of ICT use, prepares teaching materials, guidelines for their use by the teaching staff;

The *Moodle* application is used as an online learning platform within the USARB. This application is also used as a computerized evaluation tool. The functionality provided by this application meets the requirements of a computerized quality assessment tool.

4 CROSS-CASE ANALYSIS

4.1 INTRODUCTION

In this chapter we will try to make a comparative analysis between the Moldovan higher education system and the education systems in the European states: Denmark and Great Britain, highlighting both the similarities between them and the main differences, thus trying to highlight both the weaknesses and strengths, at the same time we will make some recommendations for improvement, where appropriate, in the opinion of the project team. Proposals will essentially focus on the use of active teaching and student-centered methods.

4.2 CROSS-CASE ANALYSIS: CRITERIA, PROPERTIES AND INDICATORS

Table 6. Cross-case analysis

Criteria, properties, indicators	USARB	AAU	UoG
L1 System level			
Accreditation of study programmes	The external evaluation of the educational process in higher education shall be performed by the National Agency for Quality Assurance in Professional Education (ANACIP). The National Agency for Quality Assurance in Professional Education is an administrative authority of national interest, with legal personality, autonomous to the Government, independent in its decisions and organization, and funded from the state budget and own revenues. The internal evaluation of the educational process in higher education shall be performed by the institutional structures for	The existence of the National Qualifications Framework (NQF); The legislative act regulating the accreditation of higher education was adopted in 2013. **Accreditation of higher education:** • Institutional accreditation is aimed at strengthening the efforts made to develop inclusive higher education institutions through the opening of new study programmes, which is an essential element of competitiveness and relevance.	Higher education in the UK is divided into two stages. In the first stage (Undergraduate), students generally study for three years and obtain a bachelor's degree. The second stage consists of master's degree and doctoral studies. Master studies usually last one year, and doctoral studies - three years. Monitoring in the field of standards and quality in higher education in the UK is carried out by an independent body - the Quality Assurance Agency in Higher Education (QAA).

	quality assurance, based on the institutional regulation. The higher education institutions shall be subject to external quality evaluation once in five years, in line with the methodology and criteria developed by the National Agency for Quality Assurance in Professional Education.	• Programme accreditation differs as it relates to existing programmes or to initiating new programmes. • Accreditation of existing programmes may take place either in the case of refusal of institutional accreditation or in the case of provisional accreditation.	
L2. University management level			
Governance, Management and Organization Structures of the University	The system of governing bodies consists of the Senate, the Council for Institutional Strategic Development, the Scientific Council, the faculty council, the Council of Administration, and the Rector.	• According to the Danish (Consolidation) Act of Universities, the Council is the governing body of the university. • Academic activity management is managed by the Academic Council at the university level;	The governing body of the university is the University Council, which is responsible for the educational activity and the mission of the university, approving annual estimates of income and expenditure, appointment of management staff, as well as establishing the management arrangements for the university.
L3. Faculty/Department level			
Internal responsibilities	The Faculty of Law and Social Sciences aims at organizing and carrying out the educational-training process, carrying out methodical, educational and scientific research activities for areas and specialties accredited in the first cycle of the Bachelor's degree and the second	The head of the department ensures quality, continuity and development of study programmes offered by the department as well as teaching, research and knowledge exchange activities	The Law School of the University of Gloucestershire offers the opportunity for students to know the fundamental principles of law in England, Wales and the European Union. In 2015, The Guardian ranked the Law School of the University of Gloucestershire as the Best

	cycle of the Master. The activity and institutional development of the faculty is based on the Strategic Development Plan approved by the Faculty Council for a period of 5 years. Based on this, Operational Plans of the Faculty are being developed. The results of teaching and scientific activities in the faculty are made public through annual self-evaluation reports. The USARB's Senate regularly assesses the work of faculties according to academic and accreditation standards of evaluation.		Law School in England and Wales in terms of student satisfaction with teaching.
L4. Study Board level			
Structure of the body responsible for studies	The Department of Quality Management is a coordination and execution structure that supports the *Commission for Education, Evaluation and Quality Assurance* in the achievement of quality management in the USARB by planning actions, organizing working teams for document preparation, training staff on quality assurance and managing QMS documents.	In order to solve academic, research and collaboration problems between different faculty structures, the Rector may establish study councils that manage one or more programmes.	There is a body responsible for organizing studies at faculty level
L5. Integration of disadvantaged groups of students			
Structures responsible for students with disabilities	USARB ensures people with disabilities with the necessary conditions for education, training,	Facilities for students with special needs. Integration of students from families where	To help students make the most of their time at the university, the counseling service provides them with

	professional training, vocational training and lifelong learning, without discrimination and on an equal basis with other students. USARB provides access for people with disabilities to education in order to get a degree in higher education tailored to individual needs, in line with the individual rehabilitation and social inclusion programme.	parents did not get a higher education degree.	support in any emotional, psychological or mental health difficulties they may encounter. This service is free, confidential and provided by qualified and professional counselors who understand the pressures of university life.
L6. Infrastructure (Physical environment)			
Ensuring logistics needed to optimize the training process	USARB provides a physical environment conducive to achieving the goals and mission of a higher education institution	Modern infrastructure adapted to the PBL teaching method. Classrooms for group activities. ICT equipment for on-line assessment of students.	Originally designed as a botanical garden, the Park campus astonishes its visitors with splendidly landscaped parks and lakes that surround this modern academic center.
L7. Study programme level (Public Administration)			
Integration of PBL, student-centered methods into the context of the study programme	The educational plan will be elaborated in accordance with the learning outcomes expressed in the generic and specific competences, provided in the National Qualifications Framework by fields of professional training / research fields / study programmes. In order to improve the educational plan, cooperation agreements are concluded with faculties / universities in the country and abroad, with public administration authorities	• The curriculum includes PBL based on project activity as a central and binding element and contains an exhaustive description of the educational objectives including the skills and aptitudes obtained; • The project is assigned an „n" number of ECTS; • The curriculum is a combination of fundamental and mandatory modules,	Business School of the University of Gloucestershire offers the opportunity to study law within the study programme entitled „Legal Studies". Within the „Legal Studies" programme, the teaching and learning strategy is aligned with that of the University, which aims to develop students' ability to learn independently and collaboratively, prepare them for life and employment, develop critical thinking skills in planning and decision making.

	and specialized public organizations. Within these partnerships, emphasis is put on the efficiency, standardization and adaptation of the educational plan to the current needs of reforming the public authorities system in the Republic of Moldova.	optional subjects and the project; • The role of the supervisor is well defined. He becomes mentor, guide; • The pre-requisites for working with employers are set in the curriculum including for internships within national and international companies and organizations.	The programme uses a variety of approaches, such as lectures, debates, seminars, role-plays, simulated processes, case studies and presentations, to ensure that learning outcomes of the programme can be achieved and demonstrated.
L7. Pedagogical training level			
	The Continuing Professional Training Center (CFPC) operates within the USARB. CFPC is a specialized subdivision for continuous professional training of the USARB, being integrated into the structure of the continuous professional training system of the Republic of Moldova.	In order to cope with the requirements of employment and / or promotion, the requirements of the Danish Accreditation Agency, the Learning Lab is set up within the University of Aalborg	In the United Kingdom of Great Britain and Northern Ireland there is, at the state level, the Professional Standards Framework for teaching and supporting learning in higher education.

5 PILOT STUDY PROGRAMME IN "PUBLIC ADMINISTRATION", 1ST CYCLE, BACHELOR'S DEGREE

In accordance with the Framework Plan for Higher Education (cycle I - Bachelor, cycle II - Master, integrated studies, cycle III - Doctorate), approved by Order of the Ministry of Education no. 1045 of October 29, 2015, at the elaboration of the educational plans for the three academic cycles, there will be aimed at the achievement of a **student-centered education** oriented towards **acquiring the learning outcomes** and the **training of the competences provided by the National Qualifications Framework** on cycles and by general fields of study / areas of professional training. Achieving the learning outcomes and skills training for a field of professional training will be complemented by the emphasis on the pragmatic character of the formative content of the course units included in the educational plan. In this sense, we believe that it is possible to implement a pilot programme in the specialty of Public Administration, taking into account the rigors of the Framework Plan and the need to orient teaching towards the learner.

Next, we present the draft programme developed by the head of the Private Law Department, Mrs. Ina Odinokaia, and by the lecturer Vladimir Rusu.

Ministry of Education of the Republic of Moldova

State University „Alecu Russo" of Balti

APPROVED

at the meeting of the Senate of the

State University „Alecu Russo"

of Balti

Rector _____

P. S.

_____ _____

Minutes nr. ____ of

_____2017

COORDINATED:

Ministry of Education of the Republic of Moldova

_____ P. S.

Registration nr.

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_____ _____

2017

EDUCATIONAL PLAN

cycle I (Bachelor degree studies)

Qualification level	Level 6 ISCED
General field of study	31 Political science
Field of professional training	313 Public administration
Specialty	313.1 Public administration
Total number of study credits	180
Title obtained at the end of the studies	Bachelor in Political Science
Admission basis	Baccalaureate diploma or an equivalent study document; higher education diploma
Language of instruction	Romanian
Form of organization of education	Full-time education

ACADEMIC CALENDAR

Study year	**Didactic activities**		**Examination session**		**Internships**	**Vacations**		
	sem. I	**sem. II**	**winter**	**summer**		**winter**	**spring**	**summer**
I	01.09.2017-16.12.2017	05.02.2018-26.05.2018	18.12.2017-23.12.2017; 09.01.2018-27.01.2018	28.05.2018-23.06.2018		25.12.2017-08.01.2018; 29.01.2018-04.02.2018	17.04.2018-24.04.2018	25.06.18-31.08.18
II	03.09.2018-15.12.2018	04.02.2019-25.05.2019	17.12.2018-24.12.2018; 09.01.2019-26.01.2019	27.05.2019-22.06.2019	29.04.2019-25.05.2019	25.12.2018-08.01.2019; 28.01.2019-02.02.2019	29.04.2019-06.05.2019	24.06.2019-31.08.2019
III	02.09.2019-14.12.2019	10.02.2020-16.05.2020	16.12.2019-24.12.2019; 09.01.2020-31.01.2020	18.05.2020-30.05.2020; 01.06.2020-19.06.2020 (Bachelor thesis)	04.11.2019-14.12.2019; 10.02.2020-16.05.2020	25.12.2019-08.01.2020; 01.02.2020-08.02.2020	20.04.2020-27.04.2020	

Distribution of course units / modules in educational plans by years of study

Year 1, semester 1 (15 weeks of study)

Code	Name of the course unit / module	Total hours			Number of hours by type of activity			Evaluation form	Number of credits
		Total	Direct contact	Individual study	Curs	Seminar	Laboratory		
F.01.O.001	General theory of law	180	90	90	44	46	-	E	6
F.01.O.002	Constitutional law and political institutions	180	90	90	44	46	-	E	6
F.01.O.003	Module: 1.Theory of public administration	180	60	60	30	30	-	E	6
	2. History of public administration		30	30	16	14	-		
F.02.O.004	Politology	120	60	60	30	30	-	E	4
F.01.O.005	**Interdisciplinary project**	**120**	**60**	**60**	**30**	**-**	**30**	**E**	**4**
G.01.O.006	English / French / German I	120	60	60	-	-	60	E	4
	Total hours:	**900**	**450**	**450**	**194**	**166**	**90**	**6**	**30**
					450				
G.01.O.007	Physical education I	60	30	30	-	30	-	C	

Year I, semester 2 (15 weeks of study)

Code	Name of the course unit / module	Total hours			Number of hours by type of activity			Evaluation form	Number of credits
		Total	Direct contact	Individual study	Course	Seminar	Laboratory		
F.02.O.008	**Administrative law I**	**180**	**90**	**90**	**44**	**46**	**-**	**E**	**10**
	Project	**120**	**60**	**60**	**30**	**-**	**30**		
F.02.O.009	Elements of civil law	120	60	60	30	30	-	E	4
F.02.O.010	Elements of criminal law	120	60	60	30	30	-	E	4

U.02.A.011 / U.02.A.012	Institutional law of the European Union / Political structures in the European States	120	60	60	30	30	-	E	4
G.02.O.013	Information and communication technologies	120	60	60	14	-	46	E	4
G.02.O.014	English / French / German II	120	60	60	-	-	60	E	4
Total hours:		**900**	**450**	**450**	**178**	**136**	**136**	**6**	**30**
					450				
G.02.O.015	Physical education II	60	30	30	-	30	-	C	

Year II, semester 3 (15 weeks of study)

Code	Name of the course unit / module	Total hours			Number of hours by type of activity			Evaluation form	Number of credits
		Total	Direct contact	Individual study	Course	Seminar	Laboratory		
F.03.O.016	Family law and civil status	120	60	60	30	30	-	E	4
F.03.O.017	Administrative law II	180	90	90	44	46	-	E	6
S.03.O.118	Financial and fiscal law	120	60	60	30	30	-	E	4
S.03.O.119	Contravention law	120	60	60	30	30	-	E	4
S.03.O.120	**Interdisciplinary project**	**120**	**30**	**90**	**-**	**-**	**30**	**E**	**4**
S.03.O.121	Information law	120	60	60	30	30	-	E	4
S.03.A.122 / S.03.A.123	Labor Law / Labor Law of the European Union	120	60	60	30	30	-	E	4
	Total hours:	**900**	**420**	**480**	**194**	**196**	**30**	**7**	**30**
					420				

Year II, semester 4 (15 weeks of study)

Code	Name of the course unit / module	Total hours			Number of hours by type of activity			Evaluation form	Number of credits
		Total	Direct contact	Individual study	Course	Seminar	Laboratory		
S.04.O.124	Control of the administrative act	120	60	60	30	30	-	E	4
S.04.O.125	Civil procedural law	150	75	75	45	30	-	E	5
S.04.A.126 / S.04.A.127	Social protection law / Social protection law of the European Union	120	60	60	30	30	-	E	4
S.04.O.128	Management psychology	90	45	45	30	15	-	E	3

U.04.A.029 / U.04.A.030	Principles of market economy / Public project management	120	60	60	30	30	-	E	4
G.04.O.031	The ethics and deontology of the civil servant	60	30	30	16	14	-	E	2
	Specialty internship I	**180**	**90**	**90**	**-**	**-**	**-**	**E**	**8**
	Project	**60**	**20**	**40**	**-**	**-**	**20**		
	Total hours:	**900**	**440**	**460**	**181**	**149**	**20**	**7**	**30**
					350				

Year III, semester 5 (15 weeks of study)

Code	Name of the course unit / module	Total hours			Number of hours by type of activity			Evaluation form	Number of credits
		Total	Direct contact	Individual study	Course	Seminar	Laboratory		
S.05.O.132	Legal liability of the civil servant	120	60	60	30	30	-	E	4
S.05.A.133 / S.05.A.134	E-government / E-service in Public Administration	120	60	60	30	30	-	E	4
S.05.A.135 / S.05.A.136	Land law and real estate advertising / Urbanism and landscaping	120	60	60	30	30	-	E	4
U.05.A.037 / U.05.A.038	Public service management / Human resources management in Public Administration	120	60	60	30	30	-	E	4
	Specialty internship II	**360**	**180**	**180**	**-**	**-**	**-**	**E**	**14**
	Project	**60**	**20**	**40**	**-**	**-**	**20**		
	Total hours:	**900**	**440**	**460**	**120**	**120**	**20**	**6**	**30**
					270				

Year III, semester 6 (15 weeks of study)

Code	Name of the course unit / module	Total hours			Number of hours by type of activity			Evaluation form	Number of credits
		Total	Direct contact	Individual study	Course	Seminar	Laboratory		
S.06.O.139	Public procurement management	120	60	60	30	30	-	E	4
S.06.O.140	Central public administration	90	45	45	30	15	-	E	3
S.06.O.141	Local public administration	90	45	45	30	15	-	E	3

S.06.O.142	Legal regulation of entrepreneurial activity	90	45	45	30	15	-	E	3
S.06.A.143 / S.06.A.144	Office supplies, correspondence and secretarial techniques/ Techniques for drawing up administrative documents	90	45	45	30	15	-	E	3
	Research internship	**240**	**120**	**120**	**-**	**-**	**-**	**E**	**14**
	Bachelor thesis	**180**	**90**	**90**	**-**	**-**	**-**	**E**	
	Total hours:	**900**	**450**	**450**	**150**	**90**	**-**	**7**	**30**
					240				

Internships

Nr. crt.	Internships	Sem.	Duration nr. weeks/ hours	Period	Number of credits
1.	Specialty internship I	4	4/240	29.04.2019-25.05.2019	8
2.	Specialty internship II	5	7/420	04.11.2019-14.12.2019	14
	Total				**22**

Bachelor's degree thesis

Nr. crt.	Name of activity		Sem.	Duration nr. weeks/ hours	Period	Number of credits
1.	Elaboration and defence of the bachelor thesis: documentation, investigation, research, experimentation, drafting, presentation, public defence	Research internship	VI	13/240	10.02.2020-16.05.2020 (8 ore/săpt.)	14
		Defence of the Bachelor's degree thesis	VI	3/180	01.06.2020-19.06.2020	

Initial curriculum minimum for another domain in Cycle II – Master's Degree (at free choice)

Nr. crt.	Name of the course unit / module	Year	Semester	Total hours			Number of hours by type of activity			Evaluation form	Number of credits
				Total	Direct contact	Individual study	Course	Seminar	Laboratory		
1.	General theory of law	I	I	180	90	90	44	46	-	E	6
2.	Constitutional law and political institutions	I	I	180	90	90	44	46	-	E	6
3.	*Module:* 1. Theory of public administration	I	I	180	60	60	30	30	-	E	6
	2. History of public administration				30	30	16	14	-		
4.	Administrative law I	I	II	180	90	90	44	46	-	E	6

5.	Administrative law II	II	III	180	90	90	44	46	-	E	6
Total				**900**	**450**	**450**	**222**	**228**	**-**	**5**	**30**
							450				

Course units at free choice

Nr. crt.	Name of the course unit / module	Total hours			Number of hours by type of activity			Evaluation form	Number of credits
		Total	Direct contact	Individual study	Course	Seminar	Laboratory		
1.	The bases of information culture	30	10	20	-	10	-	C	
2.	Communication culture	60	30	30	-	-	30	C	2
3.	Work safety. Civil protection	30	15	15	15	-	-	C	-
4.	Modern governance and European integration	90	45	45	30	15	-	E	3
5.	Administrative regionalization	90	45	45	30	15		E	3
6.	Legal protection of human rights	90	45	45	30	15	-	E	3
7.	Poll theory in public administration	90	45	45	30	15		E	3
8.	Management sociology	90	45	45	30	15	-	E	3

The psycho-pedagogic module (at free choice)

Nr. crt.	Name of the course unit / module	Total hours			Number of hours by type of activity			Evaluation form	Număr de credite
		Total	Direct contact	Individual study	Course	Seminar	Laboratory		
1.	Pedagogy	120	60	60	30	30	-	E	4
2.	Psychology	120	60	60	30	30	-	E	4
3.	Age psychology. Stress in the educational environment	150	75	75	45	30	--	E	5
4.	Tutorship. Inclusive education	150	75	75	45	30	--	E	5
5.	Didactics of administrative sciences	180	90	90	46	44	-	E	6
6.	Educational management	120	60	60	30	30	-	E	4
7.	Pedagogical ethics	60	30	30	16	14	-	E	2
8.	The practice of initiation in pedagogy *	30	15	15	-	-	15	-	1
9.	Practice of initiation in psychology **	30	15	15	-	-	15	-	1
10	Pedagogical internship	480	240	240	-	-	-	E	16
11.	Specialty internship I	120	60	60	-	-	-	E	4
12.	Specialty internship II	240	120	120	-	-	-	E	8
Total		**1800**	**900**	**900**	**242**	**208**	**30**	**10**	**60**

* is evaluated within the Pedagogy course unit

** is evaluated in the Psychology course unit

Description of the learning outcomes and competences

Professional competences:

PC1. Operating with the notions, concepts, theories and basic methods of the science of administration in the professional activity.

PC2. Interpretation of the fundamental principles of organization and functioning of administrative structures for the purpose of their subsequent transposition into professional activity in public and / or private institutions.

PC3. Identify, analyze and solve problems in the field of public administration in accordance with the legal provisions, in a cooperative, flexible and efficient way.

PC4. Drafting, reviewing and adopting decisions on administrative work.

PC5. Strategic planning of current professional and staff work, with the goal of institutional development in medium and perspective terms.

CP6. The use of modern technologies, the various forms and methods of control of the evaluation of the administrative activity and the formulation of proposals for its efficiency.

Transversal competences:

TC1. Rigorous, efficient, responsible and timely execution of professional tasks, in a spirit of initiative and in accordance with ethical principles and professional deontology.

TC2. Applying group networking techniques, learning and exercising specific roles in teamwork, by developing interpersonal communication skills, and taking responsibility for decision-making.

TC3. Self-evaluation of the need for professional training and identification of resources and modalities of personal and professional development, in order to integrate and adapt to the requirements of the labor market.

Matrix of correlations between professional and transversal competences and course units included in the educational plan

Code	Course unit	Sem.	Nr. of credits	Professional competences						Transversal competences		
				PC1	PC2	PC3	PC4	PC5	PC6	TC1	TC2	TC3
F.01.O.001	General theory of law	I	6	+	+	+				+		
F.01.O.002	Constitutional law and political institutions	I	6	+	+	+	+			+	+	
F.01.O.003	Module: 1.Theory of public administration	I	6	+	+	+	+	+	+		+	
	2. History of public administration			+	+	+			+			+
F.01.O.004	Politology	I	4	+	+	+	+				+	
F.01.O.005	Interdisciplinary project	I	4	+	+	+			+	+	+	
G.01.O.006	English / French / German I	I	4						+	+	+	+
F.02.O.008	Administrative law I	II	10	+	+	+	+	+		+	+	
	Project											
F.02.O.009	Elements of civil law	II	4	+	+	+					+	+
F.02.O.010	Elements of criminal law	II	4	+	+	+			+	+	+	
U.02.A.012 / U.02.A.013	Institutional law of the European Union / Political structures in European States	II	4	+	+	+		+		+	+	

G.02.O.014	Information and communication technologies	II	4						+	+	+	+
G.02.O.015	English / French / German II	II	4						+	+	+	+
F.03.O.019	Family law and civil status	III	4	+	+	+					+	+
F.03.O.017	Administrative law II	III	6	+	+	+	+	+	+			+
S.03.O.118	Financial and fiscal law	III	4	+	+	+		+	+	+		
S.03.O.121	Contravention law	III	4	+	+	+	+			+		
S.03.O.120	Interdisciplinary project	III	4	+	+	+	+	+	+	+	+	+
S.03.O.120	Information law	III	4			+	+	+	+		+	+
S.03.A.122 /	Labor Law /	III	4	+	+	+	+	+		+		+
S.03.A.123	Labor Law of the European Union			+	+	+	+	+		+		+
S.04.O.126	Control of the administrative act	IV	5			+	+	+	+	+	+	
S.04.O.127	Civil procedural law	IV	6	+	+	+	+			+		
S.04.A.128 /	Social protection law /	IV	4	+	+	+	+	+		+		+
S.04.A.129	Social protection law of the European Union			+	+	+	+	+		+		+
S.04.A.130	Management psychology	IV	3		+				+		+	+
U.04.A.031 /	Principles of market economy /	IV	4	+					+	+	+	+
U.04.A.032	Public project management			+					+	+	+	+
G.04.O.033	The ethics and deontology of	IV	2					+		+		+

	the civil servant											
S.05.O.134	Legal liability of the civil servant	V	4			+	+	+	+	+		+
S.05.A.137 / S.05.A.138	E-government / E-service in Public Administration	V	4				+	+	+	+	+	
							+	+	+	+	+	
S.05.A.139 / S.05.A.140	Land law and real estate advertising / Urbanism and landscaping	V	4	+	+	+	+			+		
				+	+	+	+			+		
U.05.A.135 / U.05.A.136	Public service management / Human resources management in Public Administration	V	4			+		+	+	+	+	+
						+		+	+	+	+	+
S.06.A.143	Public procurement management	VI	4			+	+	+	+		+	+
S.06.A. 144	Central public administration	VI	3			+	+	+	+	+		+
S.06.O. 145	Local public administration	VI	3			+	+	+	+	+		+
S.06.O.146	Legal regulation of entrepreneurial activity	VI	3	+	+	+	+		+	+	+	+
S.06.A.147 / S.06.A.148	Office supplies, correspondence and secretarial techniques/ Techniques for drawing up administrative documents	VI	3				+	+	+		+	+
							+	+	+		+	+

EXPLANATORY NOTE

1. Overview

The educational plan of the specialty *Public administration* is the document that includes a system of professional training and scientific research activities of specialists in the field of public administration. The title obtained at the end of the first cycle, undergraduate studies is *Bachelor in political science*.

The educational plan comprises:

I. the educational plan itself;
II. the explanatory note to the educational plan.

The educational plan has been linked to the objectives of the ERASMUS + project „Introducing Problem Based Learning in Moldova: Toward Enhancing Students' Competitiveness and Employability", being drawn up in accordance with the provisions of:

1. Education Code of the Republic of Moldova, no. 152 of July 17, 2014;
2. Law on the Approval of the Nomenclature of Professional Training Areas and of Specializations for the Training of the Staff in Higher Education Institutions, Cycle I, no. 142-XVI of July 7, 2005;
3. Law on the approval of the Unique Classifier of Civil Servants Positions, no.155 of 21.07.2011;
4. Framework plan for higher education (cycle I - Bachelor, cycle II - Master, integrated studies, cycle III - Doctorate), approved by Order of the Ministry of Education no. 1045 of October 29, 2015;
5. Regulation for the organization of studies in higher education based on the National Credit Transfer System, approved by Order of the Ministry of Education no. 1046 of October 29, 2015.
6. The National Qualifications Framework of the Republic of Moldova and the National Qualifications Framework for Higher Education by Professional Training Areas, approved by Order of the Ministry of Education no. 934 of 29 December 2010.

2. Concept of specialist's training

a. Purpose and features

The purpose of the pilot programme is to move from classical (theorized) education, where the teacher is an information provider, and the student is the recipient of the information, to PBL (problem-based education), which would allow the formation of competitive labor market specialists qualified in the field of professional training *313 Public administration, specialty 313.1 Public administration.*

The distinctive features of the programme are to ensure high-quality professional training for all who want to build a career in central and local government structures, as well as in specialized departments within public companies. Professional training is focused on the acquisition of: the scientific and normative foundations of the theory of constitution; the general principles of the

political system and the various management mechanisms; developing skills and training practical skills in public administration.

b. Employability

Graduates of the first cycle, undergraduate studies (Bachelor's degree studies), specialty Public Administration, can then act as civil servants in performing the following positions; specialist in organizing administrative activity; specialist in human resources; public relations specialist; specialist in organizing and delivering public services; specialist in administrative documentation; project manager in public administration; counselor in public administration; administrative officer; expert in public administration.

c. Further training

Initial training at the first cycle, undergraduate studies (Bachelor's degree studies), is a prerequisite for further studies in the second cycle, Master's degree studies, in the field of *31 Political Science* or *38 Law*.

3. Expected learning outcomes

a. Training outcomes:

At the end of the first cycle the graduate will be able:

- to apply the knowledge gained in the fundamental and specialty course units studied, in a determined professional environment;
- address specific public administration situations by applying the case study method;
- to demonstrate creativity in the instrumentation of administrative acts and procedures in the learning, research and work process;
- to show team spirit in the context of administrative decisions;
- to use the specific language of the public administration, as well as the specific methodology, in the implementation of the half-year projects;
- to analyze and synthesize socio-economic processes and phenomena by developing and implementing managerial strategies;
- to strengthen decision-making and change management capabilities in public administration by estimating risks and assuming professional responsibilities;
- to cultivate his/her collaboration skills with specialists from other fields in the context of change management;
- to demonstrate the ability to develop at cycle II, Master's Degree, the skills acquired at cycle I, Bachelor's degree.

b. The outcomes of the study programme expressed through professional competencies and transversal competencies:

Professional competences **Level descriptors of the structural elements of professional competences**	**PC1** Operating with the notions, concepts, theories and basic methods of the science of administration in the professional activity.	**PC2** Interpretation of the fundamental principles of organization and functioning of administrative structures for the purpose of their subsequent transposition into professional activity in public and / or private institutions	**PC3** Identifying, analyzing and solving problems in the field of public administration in accordance with the legal provisions, in a cooperative, flexible and efficient way	**PC4** Drafting, reviewing and adopting decisions on administrative work.	**PC5** Strategic planning of current professional and staff work, with a view to institutional developing on medium and perspective term.	**PC6** The use of modern technologies, the various forms and methods of control of the evaluation of the administrative activity and the formulation of proposals for its efficiency.
KNOWLEDGE						
1. Knowledge, understanding of the concepts, theories and basic methods of the domain and of the specialization area; their proper use in professional communication	**PC1.1** Knowledge, understanding and use of notions, concepts, theories of public administration	**PC2.1** Explaining and perceiving the fundamental principles of organization and functioning of administrative structures	**PC3.1** Identifying, understanding and efficient use of public administration methods for the purpose of legally enforcing the state of affairs	**PC4.1** Knowing the requirements of developing administrative decision drafts for various factual situations	**PC5.1** Distinguishing the fundamental strategies of planning current professional and staff activities in the field of public administration	**PC6.1** Perceiving the necessity of applying modern technologies in the activity of public administration
2. Using basic knowledge to explain and interpret various types of concepts, situations, processes, drafts, etc. associated with the domain	**PC1.2** Using the knowledge acquired in the core disciplines to explain and interpret concepts and processes in	**PC2.2** Interpretation of various administrative models in order to solve typical problems in the field of	**PC3.2** Legal analysis and assignment of situation solving and modeling of processes in the sphere of	**PC4.2** Using the criteria and requirements for the development of draft administrative decisions for	**PC5.2** Knowledge of the core strategies of planning of mid-term professional and staff activity in	**PC6.2** Identifying the forms and methods of control of the administrative activity evaluation

	public administration	public administration	public administration	various factual situations	public administration	
ABILITIES						
3. Applying basic principles and methods for solving well-defined problems / situations, typical of the field under qualified assistance	**PC1.3** Applying the basic methods for solving the actual situations in the professional training process	**PC2.3** Reporting the fundamental principles for solving the concrete situations relevant to the public administration	**PC3.3** Applying the legal norms to identify solutions for modeled actual situations in the field of public administration	**PC4.3** Implementation of the methodological principles of decision making in the administrative field under conditions of qualified assistance	**PC5.3** Applying the principles and methods for identifying strategies for planning professional and staffing activities in public administration	**PC6.3** Applying different mechanisms and forms of administrative control related to the professional field
4. Appropriate use of criteria and standard evaluation methods to assess the quality of processes, programs, drafts, concepts, methods and theories	**PC1.4** Appropriate use of standard criteria and methods of evaluation, applied in the core disciplines, for the recognition and estimation of problems in the field of public administration	**PC2.4** Appropriate application of fundamental principles for the quantitative and qualitative assessment of public administration processes	**PC3.4** Use of standard evaluation criteria and methods to assess the effectiveness of solutions for modeled actual situations in administration	**PC4.4** Analysis of draft administrative decisions to assess their legality	**PC5.4** Use of various criteria and standard evaluation methods to estimate the need for planning of professional and staff activities	**PC6.4** Appropriate use of modern technologies in public administration to assess the effectiveness of governance
5. Developing professional projects with the use of established principles and methods in the field	**PC1.5** Drawing up projects in the field of public administration using the principles and methods established by the fundamental disciplines	**PC2.5** The drafting of specific public administration projects using the principles and methods established by the specialized disciplines	**PC3.5** Drafting proposals for changing and amending legislation in the field of public administration	**PC4.5** Elaboration of draft administrative decisions for concrete situations and anticipation of the expected effects	**PC5.5** Developing an institutional managerial plan	**PC6.5** Elaboration of public administration e-transformation projects
Minimum performance	Defining notions,	Solving of cases of	Legal framing of modeled	Drafting decisional	Designing a strategic	Knowledge of standard

standards for competence assessment :	interpreting concepts and theories, and applying them in typical public administration situations.	medium complexity requiring modeling and simulation of processes and phenomena specific to public administration	situations specific to public administration	projects in the field of public administration	management plan in the field of public administration	requirements for modern communication technologies in public administration

Level descriptors of transversal competences	**Transversal competences**	**Minimum performance standards for competence assessment**
6. Responsible carrying out of professional tasks under restricted autnomy and qualified assistance	**TC1** Rigorous, efficient, responsible and timely execution of professional tasks in a spirit of initiative and in accordance with ethical principles and professional ethics.	Developing and defending, within the course units, of the planned projects, the year theses, the bachelor thesis according to the methodical rigors
7. Familiarizing with the roles and activities specific to teamwork and the distribution of tasks for the subordinate levels	**TC2** Applying group networking techniques, learning and exercising specific roles in teamwork, developing interpersonal communication skills, and taking responsibility for decision-making.	Performing of medium complexity group projects / tasks, focusing on current and relevant training issues, requiring interdisciplinary approach and enabling to develop team spirit, planning of group activity, distribution of roles in a team, diversity in cooperation, high level of study
8. Awareness of the need for continuous training; the efficient use of learning resources and techniques for personal and professional development	**TC3** Self-evaluation of the need for professional training and identification of resources and modalities of personal and professional development, in order to integrate and adapt to the requirements of the labor market.	Identifying the need for continuous personal and professional development in accordance with the needs of the labor market and the use of various learning resources and techniques in this respect.

4. The period of studies and the structure of the years of study

In accordance with the requirements of the Framework Plan for Higher Education (cycle I - Bachelor, cycle II - Master, integrated studies, cycle III - Doctorate), approved by Order of the Ministry of Education no. 1045 of October 29, 2015, the duration of the Bachelor's degree studies (cycle I), full time education is 3 years and 180 ECTS credits respectively.

The year of study is divided into two semesters of 15 weeks each. The total number of study hours foreseen in the plan - 5400, of which: direct contact hours - 2700; the number of independent working hours - 2700, which is equivalent to 180 credits.

The share of credits of the course units in the Educational plan is the following:

1. For the component of *fundamental* courses (*F*) *54 ECTS credits* are provided in the plan.
2. For the component of training of *general* skills and competences (*G*) *14 ECTS credits* are provided in the plan.
3. For the component of *socio-humanistic orientation* (*U*) *12 ECTS credits* are provided in the plan.
4. For the component of *orientation towards basic specialty* (*S*) *64 ECTS credits* are provided in the plan.
5. Specialty internship I, Specialty internship II - *22* ECTS *credits*.
6. Development and defence of the Bachelor thesis - 14 *ECTS credits*.

5. Semestrial projects

In semesters I-III, semestrial projects represent interdisciplinary research or are part of a fundamental or specialized course unit, and in the IV-V semesters they are correlated with the specialty internship I and II.

The goal of the group projects is to focus on diversity-based cooperation and to find a common denominator for solving the researched problems, focusing on studying the problem at a high logistical, creative and multi-aspect level. Also, through the projects, students will train their capacities to critically document and analyze the information, to summarize the specialized articles, to analyze and to create a thematic bibliography. The themes of the semester projects offer the student the possibility to continue their research by elaborating the bachelor thesis.

The themes of the projects proposed for the research will be current, important and relevant, and for their elaboration the students will be grouped by 3-5, being guided to a profound and consistent analysis of the researched problem.

The themes for semestrial projects will be agreed upon by the teaching staff and students at the beginning of each semester, and their public defence will take place at least one week before the start of the examination session in front of a committee composed of two or more teachers, appointed by the head of the department.

6. Organization of the students' internships

The objectives of the specialty internship are to familiarize the students with the peculiarities of the specialty, to acquire the initial professional skills. *The specialty internship I + the semestrial project* are promoted in semester IV, lasting 4 weeks and is credited with 240 hours, 8 credits. *The*

specialty internship II + the semestrial project are promoted in semester V, lasting 6 weeks, and is credited with 420 hours, 14 credits.

The research internship aims at developing the necessary practical skills and applying the theoretical knowledge to independent professional activity and conducting research, documentation and collecting information for the realization of the bachelor thesis project. The student, in agreement with the Bachelor thesis supervisor and the mentor responsible for the internship, will operationalize the content of the internship according to the research topic.

The research internship is promoted in semester VI, lasting 8 hours weekly, and is credited with 240 hours, 8 credits.

In the final evaluation, the internships are appreciated with grades by a committee created by the responsible department, taking into account the reference/review of the mentor within the internship unit about the trainee's activity, the quality of the public defence of the internship report (project), the results of the performance of the individual task, and the appreciation given by the internship supervisor. The grades obtained for the internship are included in the results of the respective examination session and are taken into account when calculating the average grade of the student's academic performance.

The assessment of the Bachelor internship is done by a committee on the defence of the bachelor internship, designated by the head of the responsible department, in two stages, depending on the activity of the student in the process of elaboration of the bachelor's thesis / project and the reference of the bachelor thesis supervisor.

7. Student evaluation

The educational plan provides the following types and ways of evaluating the learning outcomes:

- the current evaluation (test, essay, report, case study, project, presentations, thesis etc.). For the current evaluation information technologies are used (MOODLE learning platforms, etc.);
- the final evaluation of course units / module (oral / written examination, combined examination, computer-aided evaluation (on-line learning platforms), etc.).

8. Bachelor thesis

The studies are completed with the bachelor's examination which is limited to the public defence of the bachelor thesis. The graduates who have fully complied with the provisions of the educational plan and have successfully presented the bachelor thesis in front of the commission appointed by the head of the responsible department are admitted to the defence of the bachelor thesis.

The bachelor thesis is an essential part of the student's activity assessment. It tests the skills to conceive and conduct independent research, under the tutelage of the supervisor, and to draft the research paper according to the rules of the scientific community. The purpose of the bachelor thesis is to systematize and deepen students' theoretical knowledge and practical skills as well as to develop the competence to solve methodological and research problems in accordance with the subject of the bachelor thesis and with the tasks given to the student by the scientific supervisor.

The topics of the bachelor theses are elaborated by the responsible department and are disseminated to the students during the fourth semester of studies. The topics of the bachelor thesis and the scientific supervisors are approved at the meeting of the Council of the Faculty of Law and Social Sciences.

The bachelor thesis is accompanied by the opinion of the scientific supervisor.

The public defence of the bachelor thesis takes place in front of the Bachelor Commission.

9. Credits

Credits are allocated on course units, internships, and bachelor thesis that are independently evaluated. A credit is allocated for 30 hours of study. Credits reflect the amount of work invested by the student in acquiring a course unit / module, in all aspects (lectures (courses), seminars, practical classes, laboratory work, individual studies, internships, project development, evaluation). Credits allocated to a course have values ranging from 2 to 6 credits of study. By granting credits, it is certified that for the result obtained during the evaluation the expected volume of work was achieved.

10. Specialty

The plan provides training for a mono-specialty 313.1 Public administration.

11. Updating the educational plan

The educational plan for the specialty 313.1 Public Administration is reviewed and, as necessary, updated. Every year, in May, questioning programme students and graduates is organized to determine the strengths and weaknesses of the programme. The responsible for the programme monitors the administration of the questionnaires.

For this purpose, questionnaires are developed for students of the first cycle, Bachelor, who can express their opinion after hearing the courses. Questioning is done under anonymous conditions.

In order to improve the educational plan, cooperation agreements are concluded with faculties / universities in the country and abroad, with public administration authorities and specialized public organizations. Within these partnerships, emphasis is put on the efficiency, standardization and adaptation of the educational plan to the current needs of reforming the public authorities system in the Republic of Moldova.

Following the analysis of the questionnaires and as a result of the proposals submitted by the academic environment of other universities and officials from the administrative system, as well as those submitted by the teachers involved in this study programme, the educational plan is updated, by introducing optional courses / new modules, the number of ECTS credits at disciplines being reviewed and their breakdown by semesters being performed.

Modification of the educational plan is made by the responsible department and approved by the faculty council. Revision / updating of the educational plans is validated by the USARB Senate and submitted to the Ministry of Education every 5 years for coordination.

6 ROAD MAP

At present, the legal framework allows us to implement PBL as a teaching method. To achieve the 50-50 objective of classical teaching and project, it is necessary to make certain changes to the legal framework, which would result in some institutional reforms. Certain changes to the framework plan could result in staff cuts due to the decrease in hours in certain disciplines, a situation that is not wanted by the project team. An important aspect is that even at Aalborg University PBL is not reacheed at a 50 to 50 share in the Law specialty.

Below, we will present the table outlining the legal rules that need to be modified and that will facilitate the implementation of PBL and other student-centered methods. These changes will make it possible to strengthen the principle of academic autonomy and will not have a negative impact on USARB's staff.

Normative act	**Provision**	**Proposal**
Framework Plan for Higher Education, art. 9.	For one module, it is recommended to allocate 4-6 study credits	To exclude the limitation of the number of credits allocated to a module
Framework Plan for Higher Education, art. 9.	In Cycles I and II, the course unit / discipline can be accomplished through class activity (direct contact): lectures, seminars, laboratory works, practical works, design works, didactic, clinical internships and other forms approved by the Senate	To assign to the class didactic activity the supervision of the team activity of the students, and the text to be presented in the following variant: In Cycles I and II, the course unit / discipline can be accomplished through class activity (direct contact): lectures, seminars, laboratory works, practical works, design works, didactic, clinical internships, **supervision of the team activity of the students** and other forms approved by the Senate
Framework Plan for Higher Education, art. 28, e)	A Physical Education course for students of the first / second year, which is not quantified with credits, but whose assessment with the "admitted" grade is a prerequisite for admission to the graduation exam of the Bachelor's degree studies	To exclude the compulsoriness of the Physical Education course.
Regulation on the organization of studies based on NSSC, art. 82	For the study programmes of 180 credits, a year thesis shall be developed in the second year of study. For study programmes of 240 credits, a year thesis shall be developed in the second and third year of studies. The type of theses / projects is determined by the profile department / chair	To exclude the limitation to a single project with the following clarifications: ✓ May represent a fundamental or specialized course unit provided in the educational plan in semesters I-V / VII; ✓ Provides students with the ability to critically document and analyze

	according to the specifics of the study programme.	the information, to solve a problem, to summarize scientific articles, to analyze and make a bibliography on a topic, etc. ✓ The theme of the project offers the student the possibility to continue the research in the elaboration of the bachelor thesis. ✓ The themes of the projects are determined by the respective department / chair, they are included at the proposal of the labor market representatives, other representatives of the employers or can be proposed by the students themselves. To allow the allocation of ECTS credits for each project, even if they do not represent the cumulative result of several disciplines.

7 CONCLUDING REMARKS

„I never teach my pupils. I only attempt to provide the conditions in which they can learn." Allbert Einstein

As a result of drawing up this report, we came to the conclusion that the teaching approaches with the widespread use of active teaching methods, especially PBL, are necessary to be taken into account in the disciplines of the Public Administration specialty for the following reasons:

1. Cooperation with potential employers: the internship is the method by which this collaboration can be achieved;
2. Students will be motivated to study the theoretical aspects of disciplines in order to identify the relevant institutions to solve the problem;
3. The role of the teacher is to guide the student to solve the problem, education is really centered on the learner: Less us and more of them!;
4. Strengthening teamwork capabilities and the ability of students to identify free-riders from the faculty, preparing them for the realities of life;
5. The external examination (by invited staff) will exclude certain acts of corruption and will make the teaching staff more accountable, focusing on quality;
6. Students will become more receptive to each other and will support each other during their studies;
7. Students will have an active participation in curriculum design;
8. Students will be committed to continuously improving their own learning, constructive critique and impartial analysis of their own failures;
9. Academic staff will become more prominent outside the university community due to their active involvement in determining the external organizations they will collaborate with;
10. The study programme (specialty) will have a relevant impact in society due to the direct collaboration and involvement of external organizations.

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Introducing Problem Based Learning in Moldova: Toward Enhancing Students' Competitiveness and Employability (PBLMD)

www.pblmd.aau.dk

"BSc in Entrepreneurship and Business Administration": Pilot Study Student-Centred Active-Learning Programme

Cahul State University „Bogdan Petriceicu Haşdeu"

Work Package 3

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Cahul, 2017

Table of contents

1. INTRODUCTION

The purpose of this study is to conduct a comparative analysis of the study programmes in entrepreneurship at the University B.P. Hasdeu of Cahul with study programmes at Aalborg University and Gloucestershire University, whose experience and best practices will serve as a basis for the elaboration of proposals to modify the study programme in the field of *Entrepreneurship and Business Administration* at the Faculty of Economics, Engineering and Applied Sciences, from *State University of Cahul*. The experience taken over from these universities will essentially contribute to the implementation of new and modern teaching methods, centered on the student. These methods mean that all students are trained how to apply theoretical knowledge in practice by solving a problem. At the same time, this model encourages students to develop their skills of communication, group work, and analytical vision to solve the problem.

One of the student-centered methods used in a number of EU universities is Problem-Based Learning (PBL), where less emphasis is placed on memorizing a curriculum or pure theory, and mainly addresses specific problems through projects. This type of educational approach includes individual research that promotes the individual characteristics of a student's creative initiative and thinking. Students learn strategies of thinking and knowledge in the field. PBL's aims are to help students develop flexible knowledge, effective problem-solving skills, self-directed learning, effective collaboration skills and intrinsic motivation. Problem-based learning is an active learning style.

The working team on this report was made up of:

Table 1. Composition of the working team on the report

Nr. d/o	Surname, name	Title, function in SUC	Position in the team
1.	Roşca-Sadurschi Ludmila	Senior lecturer, Head of department EMAS	Team leader
2	Andrei Popa	Dr.hab., Professor, Rector of SUC	Team member
3.	Todos Irina	Assoc.prof., PhD, Vice-rector of SUC	Team member
4.	Gîrneţ Slavic	Senior lecturer	Team member
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2. REVIEW OF LITERATURE AND SYNTHESIS OF SOURCES

2.1 INTRODUCTION

Trends in modern education require a deep focus on student-centered methods. The advantages of these methods determine the necessity of a more complex study in order to implement them in the education system of the higher education institutions of the Republic of Moldova.

During the study visits, the team members had the opportunity to analyze how to apply student-centered methods in practice in institutions such as: Aalborg University (Denmark), University of Gloucestershire (UK), KTH Royal Institute of Technology (Sweden), University of Siegen (Germany).

For a deeper understanding of the principles of student-centered methods, it is necessary to study the specialized bibliographic sources. In this respect, the following sources were consulted:

1. New Approaches to Problem-Based Learning: Revitalising Your Practice in Higher Education/ edited by Terry Barrett and Sarah Moore
2. Problem- based Learning Online/ edited by Maggi Savin-Baden and Kay Wilkie
3. Problem-Based Learning: Case Studies, Experience and Practice/ edited by Peter Schwartz, Stewart Mennin and Graham Webb
4. Psychology for Psychologists: A Problem Based Approach to Undergraduate Psychology Teaching/ edited by Alexia Papageorgiou, Peter McCrorie, Stelios Georgiades and Maria Perdikogianni
5. Teaching for Quality Learning at University: What the Student Does, 4th edition/ edited by John Biggs and Catherine Tang
6. The Power of Problem-Based Learning: A Practical "How to" for Teaching Undergraduate Courses in any Discipline/edited by Barbara J.Duch, Susan E. Groh and Deborah E. Allen

The first analyzed source, *New Approaches to Problem-Based Learning: Revitalising Your Practice in Higher Education / edited by Terry Barrett and Sarah Moore,* highlights the idea that problem-based learning (PBL) is a pedagogical approach that has the capacity to create vibrant and active learning environments in higher education. The new approach to problem-based learning is: Revitalizing practice in higher education provides guidance from a range of different, complementary perspectives..

Lecturers, practitioners in the field, and new voices in PBL teaching and learning have collaborated to create this guide. Each chapter offers practical and experimental ideas on problems and ideas for PBL, as well as a theoretical and evidence-based basis. Whether the reader is an experienced or new PBL practitioner in the PBL processes and principles, this book will help him / her find ways to revitalize and enrich his / her practice and improve learning experience in a range of contexts in higher education.

The book consists of 20 chapters, which are grouped in three parts:

1. *Stakeholders designing PBL initiatives* (chapters 1-8);

2. *Students using PBL to enhance capabilities* (chapters 9-14);

3. *Sustainability and building capacity in PBL initiatives* (chapters 15-20).

The book *„Problem- based Learning Online"/ edited by Maggi Savin-Baden and Kay Wilkie* is a great opportunity to distinguish the challenge of the diversity of learning technologies and their complicated association with pedagogical approaches. The terms used in the book - combining, uniting and interdependence - in some ways undermine the major challenges it raises.

It is the first book that: addresses current problems and online problem-based learning (PBL) together in a single volume; presents and explores the range and diversity of online PBL application; presents solutions on how course design influences learning in PBL.

The book provides research-based information on the realities of setting up and conducting problem-based study programmes, using technology in a variety of ways.

The book *Problem-Based Learning: Case Studies, Experience and Practice / edited by Peter Schwartz, Stewart Mennin and Graham Webb* mentions that problem-based learning (PBL) is becoming widely used in higher education. Popular in medical science, PBL now finds applications in the field of engineering, science and architecture - and is very applicable in many areas. It is a powerful teaching technique that addresses both students and educators. This book will be of great value for those who want to improve their use of PBL and for those who want to learn more and to implement it. It provides convincing examples of PBL experiences from eight countries, including the UK, USA, Canada, Australia and New Zealand, and gives readers the opportunity to understand PBL and develop strategies for their own curriculum in any subject and at many levels.

The book *Psychology for Psychologists: A Problem Based Approach to Undergraduate Psychology Teaching/ edited by Alexia Papageorgiou, Peter McCrorie, Stelios Georgiades and Maria Perdikogianni* uses psychological theories and learning processes, such as problem-based learning (PBL), to provide a new approach to teaching Psychology in the first cycle, Bachelor's degree studies, and to prevent the decrease of motivation. It creates a detailed example of a degree of psychology using the PBL method and suggests how a course week could be planned.

„Teaching for Quality Learning at University: What the Student Does, John Biggs and Catherine Tang. This book is an exceptional introduction to some difficult ideas. It is full of good advice for every academician who wants to do something practical to improve his / her students' learning.

Biggs and Tang present a unified vision of university education, which is grounded in both research and theory, and is full of advice for novice instructors and experts. The book will inspire, provoke, disturb, bother and even angry readers, but will help them to think about how high-quality teaching can contribute to high-quality learning.

The book includes a wide variety of fields and disciplines, as well as examples from the authors' experience in implementing constructive alignment in various countries: Australia, Hong Kong, Ireland, North America, etc.

The Power of Problem-Based Learning: A Practical "How to" for Teaching Undergraduate Courses in any Discipline/edited by Barbara J.Duch, Susan E. Groh and Deborah E. Allen. The University of Delaware is internationally recognized as a center of excellence in the use and

development of PBL. This book presents the accumulated knowledge and practical experience gained over nearly a decade of PBL integration into courses in a wide range of disciplines.

The book is about „HOW TO?". It focuses on the practical questions that a teacher who wants to practice PBL has: „Where do I start?" – „How do I formulate problems?" – „What do I need to know about managing groups?" and so on

2.2 POLICIES TO MODIFY STUDENT-CENTERED STUDY PROGRAMMES AND CURRICULA

Student-centered education is one of the main milestones in the reform of European higher education, known as the Bologna Process. Students, teaching staff, and higher education institutions contribute to the achievement of student-centered education.

The quality of education depends on several factors, one of the key factors being the quality of the design of the educational process. Curricular design, existing in the higher education institutions of the Republic of Moldova, requires continuous improvement[1].

The study programmes based on the student-centered training model requires a paradigm shift and therefore a change in the mentality of the teachers responsible for designing and delivering the qualification programmes. This implies that programmes must be organized in order to achieve the stated learning outcomes.

Under the current conditions, more and more universities focus on student-centered learning and teaching, based on curriculum development taking into account the learning outcomes that students have to achieve at different levels[2].

Learning outcomes should be reflected on 3 levels:

- *At institutional level*, as an affirmation of what university graduates are supposed to be able to do;
- *At programme level,* as an affirmation of what graduates of a study programme should be able to do;
- *At the discipline level,* as an affirmation of what students should be able to know and use at the end of a course [3].

Student-centered study programmes should be designed in such a way that students develop their specific mix of skills that are considered useful and necessary to the academic, professional and / or vocational domains.

A learning outcome is a measurable result of a learning experience that allows the skill degree / level / standard formed or developed by the student to be determined.

The authors recommend un dertaking the next steps before developing the learning outcomes:

1. we have to decide which knowledge should be involved;

[1] CENTRAREA PE STUDENT ÎN CONTEXTUL PROCESULUI BOLOGNA, Roza Dumbrăveanu, Chișinău 2014, p. 5

[2] Teaching for Quality Learning at University: What the Student Does, 4th edition/ edited by John Biggs and Catherine Tang, p.9

[3] idem, p.113

2. selecting topics to be taught;
3. we need to decide on the purpose of teaching the subject and determining the level of performance achieved by students[4].

The curriculum map will help to verify that the results match those set out in the programme. This requires a systematic review of the results provided in the programme with those obtained after graduation[5].

An overriding role in implementing new educational approaches, namely student - centered training programmes or curricula, is the responsibility of the university management. Most importantly, they must set a right balance between upward and downward innovation approaches, develop a proper incentive system, recognize the different needs of the faculties, monitor and find a compromise between the cost-benefit ratio of innovation, to provide support for innovation and to collect relevant data demonstrating the effectiveness of innovation.[6]

John C. Cavanaugh believes that „in order to implement this change, it is essential that it be sustainable and long-term oriented. The secret of sustainability is relatively simple: a) establishing a sustainable programme of faculty development, b) maintaining an appropriate combination of incentives, c) creating the need for a new training plan or curriculum, etc.) generating advertising and recognition".[7]

New curricula should be developed on the basis of the following provisions: organization of content around problems, orientation of learning on accumulation of experience and individual perspectives for students, use of students' personal knowledge and experience as a starting point for analysis, development of critical thinking skills, analytical skills and skills for continuous development.[8]

In the book *„Problem-Based Learning case studies, experience and practice"* it is mentioned that one of the pioneers of introducing the PBL method was the *University of McMaster Medical School in Canada* that introduced the PBL study programme in the second half of the ‚60s. After which a growing number of educational institutions implemented the PBL in their study programmes. The results of the research where the effects of the student-centered PBL study programme are relevant (*Albanese and Mitchell, 1993; Schmidt, 1987; Vernon and Blake, 1993*). Among the results obtained, we note the following[9]:

- Students who studied under the PBL study programme had the same performances as students in the traditional curriculum;

[4] idem,p.130
[5] idem,p.125-130
[6] The power of problem-based learning: a practical "how to" for teaching Undergraduate Courses in Any Discipline", edited by Barbara J.Duch, Susan E. Groh, and Deborah E. Allen, 2001, p.36
[7] idem, p.34
[8] The power of problem-based learning: a practical "how to" for teaching Undergraduate Courses in Any Discipline", edited by Barbara J.Duch, Susan E. Groh, and Deborah E. Allen, 2001, p.200
[9] Problem-Based Learning: Case Studies, Experience and Practice/ edited by Peter Schwartz, Stewart Mennin and Graham Webb, p. 3

- Students who studied under the PBL study programme are superior to the students in the traditional curriculum in the following aspects: approach to studies; knowledge gained for the long term; motivation towards studies; perception of stress during studies;
- The teaching staff of the interviewed faculty appreciate more positively the involvement and the role of the students who studied unde the PBL study programme;
- The costs of applying the PBL study programme are comparable to those of the traditional curriculum in a class of approximately 100 people.

The idea of effective management within PBL is actively promoted in the first section of the book, which includes 8 case studies related to PBL study programmes.

Problem based learning is explained and developed in *Psychology for Psychologists: A Problem Based Approach to Undergraduate Psychology Teaching*. The authors provided a summary of teaching theories, namely the origins of problem-based learning[10] (Barrows 1980), arrangements for the practical application of modern teaching theories[11] (Schmidt 1983) and ways of organizing classes so that students learn skills to solve problematic situations.

It is important to note the competences developed by students through problem-based learning, namely: systematic learning abilities, leadership competences, sensitivity in approaching teamwork, development of explanation, listening and negotiation skills, etc.[12]. (Dolmans, 2005).

The authors have identified various methods of applying problem-based learning and have argued in favor of developing a problem-based curriculum, compared to traditional study programmes[13] (Colliver, 2000).

Various ways of assessing students' knowledge were identified and explained in the chapter „Evaluating students in problem-based education programmes". The authors highlighted the principles of knowledge assessment, process orientation versus outcome orientation, feasibility of evaluation criteria, validation of evaluations, and provide examples of questions to evaluate students' knowledge[14] (Hays, 2008).

Currently, more and more experts support the idea of training specialists in various fields through modern technologies. The authors of the book *Problem-based Learning Online* illustrate a number of advantages and features of PBL-based training through the figures on pages 63, 68, 83, 95.

The subjects of the training process have suffered very many positive transformations, the roles and rules of communication and goal setting for each category of participants in the learning process have changed. New training programmes (curricula) should focus on three basic principles: Learning through modeling and simulation, self-directed learning, and learning by doing.

[10] Psychology for Psychologists: A Problem Based Approach to Undergraduate Psychology Teaching/ edited by Alexia Papageorgiou, Peter McCrorie, Stelios Georgiades and Maria Perdikogianni, p. 19
[11] idem, p. 20
[12] Psychology for Psychologists: A Problem Based Approach to Undergraduate Psychology Teaching/ edited by Alexia Papageorgiou, Peter McCrorie, Stelios Georgiades and Maria Perdikogianni, p.26
[13] idem, p.28
[14] idem, p.35

2.3 CHANGES IN STUDENT, TEACHER AND STAKEHOLDER RELATIONSHIPS

The authors of the book „*Teaching for Quality Learning at the University: What the Student Does*" claim that the efficiency of teaching in teachers depends on how to think and appreciate what the teaching process is. Three levels of teaching thinking are known. The first two are blame models, in the first case of the student, in the second – of the teacher. The third model integrates teaching and learning, appreciating effective teaching as encouraging students to use learning activities to achieve the proposed learning outcomes[15].

The first level focuses on differences between students: they are good and weak students. Thus, teachers see their responsibility as knowing the course and its clear exposure. The transmission of information takes place through traditional teaching, so the differences in material assimilation and learning among students are explained by skills, motivation, what school they have graduated, etc.[16]

Teachers at second level focus on what teachers do. This model is also based on transmission, but the transmission of concepts and understanding, not just information. The learning process is appreciated according to what the teacher does and not the type of student they interact with. This method of teaching is centered on the teacher[17].

The third level focuses on what the student does and how he / she addresses the teaching process. This model of teaching is student-centered and the purpose of teaching is to provide learning support.

So, according to this model, the role of the teacher changes, he / she is no longer the decisive factor and the expert, and this can create psychological barriers for many teachers who are accustomed to the traditional teaching system. [18]

In the case of PBL, the relationship between student and teacher changes: the teacher is seen as a mentor, helping students to adapt as much as possible and „perceive" the problem.[19]

Usually PBL involves students' work in groups of 3-7 persons. This interaction is more acceptable because the members of such a group feel more comfortable and this increases the degree of their involvement in the group.[20]

Discussions, debates, problem analysis in the team and reaching consensus are the necessary conditions of democracy, which, applied in society, offer it many opportunities. Thus, PBL allows students to overcome many obstacles and go beyond both personal and society boundaries.[21]

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[15] Teaching for Quality Learning at University: What the Student Does, 4th edition/ edited by John Biggs and Catherine Tang, p. 16

[16] idem, p. 18

[17] Teaching for Quality Learning at University: What the Student Does, 4th edition/ edited by John Biggs and Catherine Tang, p. 19

[18] idem, p. 20

[19] The power of problem-based learning: a practical "how to" for teaching Undergraduate Courses in Any Discipline", edited by Barbara J.Duch, Susan E. Groh, and Deborah E. Allen, 2001, p. 200

[20] idem, p. 197

[21] idem, p. 197

Once there is an understanding in the application of PBL, both teachers and students require adequate training and time to accept changes that will interfere with their roles and behavior. The case study „Come and see the real thing"[22], is a relevant example demonstrating that active involvement of teachers in PBL tasks addressed to student can raise questions and raise doubts that can not be successfully overcome until more experience is gained.

Also collaborating with external experts and potential employers can help to understand the key issues in PBL. The hypothesis is supported by the case study called „Why do faculties have teachers if they do not teach?"[23].

At the same time, the book presents at least two examples, „Did the students do this?" and „They did not lift their weight"[24], in which the collaboration between students and teachers has resulted in positive outcomes.

Effective communication and collaboration are axiomatic to any human progress. The cases illustrated in this book show how important communication is both among the faculty members who apply PBL and among the students working in the same group, and of course between the teachers and students involved in the PBL process.

In the book *„Problem-Based Learning case studies, experience and practice"* it is stated that when applying PBL students usually work in small groups supervised by a tutor having the role to facilitate discussion and study process without being a direct source of information. This brings about a change in both the role of the teacher and the change of the teacher-student relationship.

The problem-based teaching method is also described and explained in the book *Psychology for Psychologists: A Problem Based Approach to Undergraduate Psychology Teaching* based on teamwork. It is proposed that students create groups that will be given problematic situations to solve. These „problems" can be formulated as case studies, clinical examples, in written, graphic, visual form, etc. Then, students will be suggested to apply the seven steps to solve the problem according to the problem-based teaching method[25] (Schmidt, 1983). Documentation, research of problem is part of the method - students are encouraged to come up with their own ideas and suggestions to solve the problematic situation, based on the theoretical knowledge previously obtained and during the application of this method.

The role of tutors (course creators or teachers) is very well detailed in the book *Problem-based Learning Online* on pages 90-97. According to those presented, it is intended to implement a type of participatory training where the relationship between the teacher and the learner is focused on: mutual information, facilitating access to information, negotiation and training. Figure 6.2 on page 91 illustrates schematically the role of tutors in face-to-face training versus on-line training.

[22] Problem-Based Learning: Case Studies, Experience and Practice/ edited by Peter Schwartz, Stewart Mennin and Graham Webb, p.13

[23] Problem-Based Learning: Case Studies, Experience and Practice/ edited by Peter Schwartz, Stewart Mennin and Graham Webb, p. 98

[24] idem, p. 163

[25] Psychology for Psychologists: A Problem Based Approach to Undergraduate Psychology Teaching/ edited by Alexia Papageorgiou, Peter McCrorie, Stelios Georgiades and Maria Perdikogianni, p. 20

2.4 INNOVATIVE STUDENT-CENTERED PBL AND ACTIVE LEARNING

The authors of the book *Teaching for Quality Learning at University: What the Student Does, 4th edition*, John Biggs and Catherine Tang refer to PBL (problem-based learning) as an innovative teaching method, it is mentioned that it is most often used in professional education, but can also be used in teaching basic disciplines[26].

There are several changes and versions of PBL, but they should focus on five objectives:

1. Structuring knowledge for use in lucrative contexts. PBL is concerned about the enhancement of knowledge that can be used in practice.
2. Elaboration of justification processes, such processes include problem solving, assumptions, decision-making.
3. Developing their own learning skills: generic skills in the field, content specific skills and especially self-management skills.
4. Higher motivation for learning, students are placed in a context that requires their immediate involvement.
5. Developing group work skills.

Albanese and Mitchell (1993) made an analysis of the studies published between 1972 and 1992, reaching the following conclusions:

- Both teachers and students appreciate PBL at a higher level than traditional teaching;
- In PBL, students use more complex strategies to understand the material and work individually;
- PBL students become more in-depth in their learning approaches because they use much more varied sources than regular students who usually rely on course notes or the reference manual[27].

The characteristics of a „good" problem, in Barbara J. Duch's opinion, are as follows:

- The effective problem must attract the student, interest him / her, and motivate him / her for a deeper understanding. This must be as real as possible.
- The problem that works well encourages students to make decisions based on arguments, facts, information, logic and / or rationalization.
- The problem must be complex and require the cooperation of all team members to solve it.
- The first question at the first level of the problem study should be open, based on existing knowledge and / or be questionable so that all students can participate in the discussion.
- The objectives of the content of the discipline must be included in this problem and be conductors between the students' existing knowledge and new concepts.[28]

[26] Teaching for Quality Learning at University: What the Student Does, 4th edition/ edited by John Biggs and Catherine Tang, p. 179

[27] Teaching for Quality Learning at University: What the Student Does, 4th edition/ edited by John Biggs and Catherine Tang, p. 182

[28] The power of problem-based learning: a practical "how to" for teaching Undergraduate Courses in Any Discipline", edited by Barbara J.Duch, Susan E. Groh, and Deborah E. Allen, 2001, p. 47-50

In addition, a well-conceived problem must always be described (basic idea, real conditions of activity, introduction of the student into the problem data, description of a detailed plan on how to use the problem in his / her course, identification of resources for students).[29]

In the book *„Problem-Based Learning case studies, experience and practice"* it is stated that in student-centered education, students are the ones who assume responsibility for their own knowledge, this being the basic philosophy of the PBL process[30].

In active learning, the student usually undertakes the following steps[31] :

1. the student first encounters a problem without having previously documented on the subject;
2. after that they interact in group with each other to explore the existing knowledge that is tangent to the problem proposed for the study;
3. formulates and tests hypotheses that may matter in solving the problem;
4. identifies future learning objectives to progress in the proposed study;
5. studies individually between group meetings;
6. reintegrates with his / her group to share the acquired knowledge and apply them in the study of the problem;
7. repeates the step 3 to step 6, if necessary;
8. reflects on the process and the content that has been learned.

Another extremely important aspect in the book argues that even the evaluation methods used in the PBL must correspond to the way students learn PBL[32] .

The modern PBL method of teaching is superior to the traditional one in many ways, but it also faces some difficulties in the implementation process. Process orientation versus outcome orientation is one of the questions addressed to supporters of this method, says Alexia Papageorgiou, Peter McCrorie, Stelios Georgiades and Maria Perdikogianni, authors of the book *Psychology for Psychologists: A Problem Based Approach to Undergraduate Psychology Teaching*[33]. It is especially important to set criteria for assessing the tasks offered to students in order to make the teaching-learning process as objective and effective as possible. The authors provide a figure illustrating the knowledge gained by students by using the PBL method[34]. Various methods of student assessment are listed through a variety of diverse and varied tests. Many specialists are inclined to use essays as a reflection and meditation test, but also oral evaluation methods, multiple choice questions, true / false questions, brief case studies, etc. are also used[35]. It is widely practiced to present individual tasks and reports and discussion in groups on concrete situations / case

[29] idem, p. 50-53

[30] Problem-Based Learning: Case Studies, Experience and Practice/ edited by Peter Schwartz, Stewart Mennin and Graham Webb, p. 170

[31] idem, p. 2

[32] Problem-Based Learning: Case Studies, Experience and Practice/ edited by Peter Schwartz, Stewart Mennin and Graham Webb, p. 149

[33] Psychology for Psychologists: A Problem Based Approach to Undergraduate Psychology Teaching/ edited by Alexia Papageorgiou, Peter McCrorie, Stelios Georgiades and Maria Perdikogianni, p. 36

[34] idem, p. 40

[35] idem, p. 52

studies[36]. Last but not least, it is recommended that students collect information and tasks solved in a portfolio, including in it their own opinions, teacher feedback and other additional information[37].

In the book *New Aproaches to Problem-Based Learning: Revitalising Your Practice in Higher Education*, the authors Terry Barrett and Sarah Moore pay special attention to the analysis of recently emerged theories in the field that allow you to familiarize yourself with the latest investigations in the PBL elements[38].

In the first chapter [39] the authors of the book make a review of the evolution of the PBL concept, of defining all the component elements of the PBL integration process in the upper school.

They try to find answers to the following questions:

- What is the value of PBL?
- What new approaches in PBL do teachers apply?
- How can PBL improve the study process?
- How is it possible to revitalize our PBL practices?

According to the authors of the book, the PBL concept consists of 6 basic dimensions, which served as starting points for the writing of the book[40]:

a) Developing the problem in PBL
b) PBL monitoring in small teams
   Typically, they work in teams from 5 to 8 students under the supervision of a tutor.
c) Evaluations in PBL
   Appropriate assessment methods can improve the learning process of the student.
d) Curriculum development in PBL
   Curriculum development in PBL is a multidimensional managerial project (Conway & Little, 2000). Chapter 15 is really useful for the curriculum planning process. The methods of curriculum change are discussed in Chapter 17[41].
e) Capacity and knowledge development
   Employers are constantly asking for such comptences from higher education graduates: ability to communicate, work in teams, manage information, think creatively and critically, solve various problems, etc.
f) Philosophy of PBL
   It tries to determine the roles of all stakeholders involved in PBL: the tutor, the supervisor, the reader, the observer, etc.

[36] idem, p. 54
[37] idem, p. 58
[38] New Aproaches to Problem-Based Learning: Revitalising Your Practice in Higher Education/ edited by Terry Barrett and Sarah Moore, p. 16
[39] idem, p. 3
[40] idem, p. 4
[41] New Aproaches to Problem-Based Learning: Revitalising Your Practice in Higher Education/ edited by Terry Barrett and Sarah Moore, p. 229

The chapters in the book are written by several authors (theoreticians and practitioners), and a great advantage is that they analyze various aspects of PBL from their own experience, accumulated over a long period of time.

2.5 INFLUENCE OF INFORMATION AND COMMUNICATION TECHNOLOGIES ON PBL, TRAINING AND CURRICULUM DEVELOPMENT

Educational technologies offer teaching-learning activities that can address a wide variety of learning outcomes. E-learning can be an alternative to traditional classroom teaching and may involve students in specific activities such as, for example, computer based conferences, knowledge forums. Students can work online and use social networks or skype to organize teamwork, interact with teachers or colleagues, and post serious reflections.[42]

The rapid development of Internet-based technologies allows them to be used in curriculum and study programmes development. Depending on the objectives of the course, the teacher can provide students with a list of websites containing useful information, or give them the concrete names of the sources.[43]

In addition, communication between groups or student-student communication in the case of group activity is of great importance. Often, such communications are more effective than classroom discussions in terms of saving time and speed of information exchange. Also, the teacher can communicate more intensely with students through their websites, get feedback quickly from them.[44]

In the book *„Problem-Based Learning case studies, experience and practice"*, the need to develop the teaching and consequently the modification of the curriculum to the application of the PBL method is actively promoted. However, none of the 22 case studies presented in the book describes a situation where the impact of ICT in PBL student-centered education is estimated. Case studies predominantly focus on the difficulties of implementing PBL from the perspective of teachers or students, without making a connection with the use of information technologies in the cases presented in the book.

The PBL teaching method, considered by the authors of the book *Psychology for Psychologists: A Problem Based Approach to Undergraduate Psychology Teaching*, involves the analysis of large amounts of information independently and the implementation of knowledge gained from the teacher and accumulated on its own. To facilitate the learning process, various techniques and technologies of communication and teaching can be used. The teacher can use the projector to make interesting and interactive presentations. The MOODLE system offers a multitude of opportunities to place specialized information for the students of a particular course at specific disciplines; assessment of students' knowledge can also be done through MOODLE. Teachers can use Podcast to provide detailed information on the requirements of certain tasks or to provide

[42] Teaching for Quality Learning at University: What the Student Does, 4th edition/ edited by John Biggs and Catherine Tang, p. 78

[43] The power of problem-based learning: a practical "how to" for teaching Undergraduate Courses in Any Discipline", edited by Barbara J.Duch, Susan E. Groh, and Deborah E. Allen, 2001, p. 73

[44] idem, p. 72

feedback to students. The online seminars are widely used, thus reaching a common denominator in the case of time divergences. Students can attend classes at home or anywhere in the world.

It is important to capitalize on the technical possibilities offered by modern society, and the teaching-learning process should always be in step with the new discoveries and should benefit from the novelties and innovations in the world of communication technologies.

In the 21st century, it became very common to work and learn in the virtual environment, thinks Maggi Savin-Baden and Kay Wilkie, the authors of the book *Problem-based Learning Online*. Classical learning and communication methods are gradually being replaced by modern ones. Through ICT, the following training modalities have been developed and implemented:

- ✓ Audio lessons and video lessons;
- ✓ Communication applications: Chat and forum;
- ✓ Tasks verification method - Drop-Box;
- ✓ Video conferencing;
- ✓ Evaluation methods: peer to peer and self-evaluation.

What is amazing, the „Chat", „Drop-Box" and „Forum" methods are much more popular than face-to-face training. Thus, learners appreciate the convenience of remote communication.

2.6 CONCLUSIONS

In the process of teaching, we must focus not only on what we should teach, but on what we would like our students to know and how we can help them achieve these outcomes. Teaching materials delivery and assimilation are developed and implemented to align with these outcomes. The book *Teaching for Quality Learning at University, 4th edition, Open University Press* is an aid to university professors who want to improve their teaching quality and focus more on student-centered learning. It includes both theoretical milestones, studies, and practical recommendations for novices and experts from the academic environment. This work helps you think about how the high quality of teaching can contribute to raising the quality of learning.

Problem-based learning - is a training strategy that helps students acquire special thinking skills and communication skills that are so necessary in the modern world.[45]

Today's students must be developed multilaterally, even more than 10 years ago. The problems the future professionals will face differ in their complexity and therefore require innovative interdisciplinary approaches in the field of training.[46]

Under the influence of PBL, all aspects of modern training change: the emphasis is on self-development of the student with the necessary support of the teacher, the relationship between students, teachers and enterprises involved in the PBL process, the teaching methods are changed, the role of information technology increases in the training process.

[45] The power of problem-based learning: a practical "how to" for teaching Undergraduate Courses in Any Discipline", edited by Barbara J.Duch, Susan E. Groh, and Deborah E. Allen, 2001, p. 3
[46] idem, p. 4

Summarizing the content of the book *„Problem-Based Learning case studies, experience and practice"*, we note a number of difficulties in the implementation of PBL that have repeatedly emerged in the case studies presented in this paper.

In particular, these difficulties / barriers in the application of PBL referred to the following aspects [47]:

- the reticence of teaching staff and students towards the changes imposed by the transition from a traditional study programme to the one that includes PBL elements;
- the fear of losing control and fear of the unknown;
- the lack of knowledge tangential to PBL principles and practices both from teachers and students;
- the tendency to demonstrate that PBL works at least as well as traditional teaching-learning methods.

However, from the case studies presented in the book it can be seen that in most cases all these difficulties / barriers have been overcome through effective management and by learning from one's own mistakes and the mistakes of others, acquiring new knowledge from the experience gained.

The case studies presented in the book illustrate several attempts and errors made in the application of PBL. At the same time, the book also illustrates the changes that need to be made to promote adaptation to new learning-teaching methods. Of course, there are also mentioned situations of successful implementation of the PBL method in the study programme.

The usefulness of the book results from the fact that its users will be able to apply the knowledge gained from this reading when faced with a similar situation in their own implementation of the PBL method[48].

The book "*Psychology for Psychologists: A Problem Based Approach to Undergraduate Psychology Teaching*" made an attempt to introduce a problem-based curriculum in teaching psychology. The book also provides information about the infrastructure needed to implement, evaluate and manage such a problem-based course.

Trends in education raise a growing emphasis on new teaching, learning and participatory learning methods. In this context, the book *Problem-based Learning Online* provides useful and current information on trends in the country's education system. The information presented in this book is very well systematized and treats, quite complexly, the problem of transition from face-to-face training to distance learning through ICT and PBL.

The book "*New Aproaches to Problem-Based Learning: Revitalising Your Practice in Higher Education*" is a complex collection of ideas, approaches, examples, behavioral patterns related to the use of PBL in higher education. It will facilitate finding many answers to questions that will surely appear in the process of applying the PBL method in local universities.

[47] Problem-Based Learning: Case Studies, Experience and Practice/ edited by Peter Schwartz, Stewart Mennin and Graham Webb, p. 171

[48] Problem-Based Learning: Case Studies, Experience and Practice/ edited by Peter Schwartz, Stewart Mennin and Graham Webb, p. 7

This book will allow teaching staff to explore new ways to involve students in the PBL method, avoiding some potential difficulties from the very beginning and being aware of certain risks.

General view of the sources analyzed can be summarized in the following conclusions:

1) The problem may be theoretical, practical, social, technical, symbolic-cultural and / or scientific and derives from the question of students within different disciplines and professional backgrounds. The problem is the starting point that directs the learning process of students and places learning in a context. A chosen problem must be exemplary. The problem may involve an interdisciplinary approach both in the analysis phase and in the solving phase.
2) Exemplarityy is a principle of selecting relevant learning outcomes and scientific content / knowledge that is exemplary to the overall learning outcomes. That is, a problem must relate to a certain practical, scientific and / or technical field. The problem should be an example or a specific manifestation of more general learning outcomes related to knowledge and / or research methods.
3) The team is a group that shares and collaborates closely in design, decision making, analysis and reflection. Compulsory cooperation of team members with regard to the successful completion of the project is an essential component of the global learning approach.
4) Students choose the problem-based and project-based educational model and, through this understanding, are able to successfully engage in order to achieve the educational objectives of the institution. In their work, students maintain an institutional culture of authentic collaboration, self-activation, mutual learning, and personal responsibility. The institution supports students in this regard by guiding and providing appropriate services.
5) Students are able to identify ways in which the problem-based approach and project-based approach shapes academic activity and successfully integrates its components as they reach broader institutional learning objectives as well as the objectives of the study programme. In their work, students demonstrate a high level of self-motivation and personal responsibility for learning.
6) Students possess and are supported in the development of powerful project management skills that allow timely completion of projects.
7) With the appropriate support of the institution, students are able to negotiate and successfully address the inevitable conflicts that arise in collaborative work. These skills are developed as part of the orientation of students towards problem-based and project-based model and are then supported, as appropriate, by faculty members and administrators. Clearly affirmed institutional policies identify the sphere and nature of the support available to students.
8) Students contribute to and maintain a strong collaboration culture that values active participation in the course and project work. Successful collaboration strategies on project activity are presented to students as part of their orientation experiences (i.e. courses and early projects). In their project groups, students formally or informally address the expectations regarding academic performance, patterns of work, and norms for

interpersonal relationships. Students show a high level of mutual support in their academic work.

9) Students play a significant role in managing study programmes. There are provided ways of communication for students' contribution to curricular development and implementation, semester topics, course offerings and academic policy, for instance by participating in managing the study programme or through systematic assessments.
10) Students actively participate in evaluation processes and institutional evaluation. Participation is characterized by a clear commitment to improvement, critical analysis and constructive feedback.
11) Students actively engage in substantial dialogue with faculty members about their coursework and application of knowledge in the context of their problem / project. This dialogue takes place in a collective atmosphere characterized by mutual respect and the genuine commitment of all those involved.
12) The role of theteacher-tutor is most often held by a faculty member, serving as a resource for groups of students involved in project work. Each group of students has one or more tutors for a project. The relationships between tutors and groups do not exceed the duration of the project. It means that a student (or a group of students) does not have a formal relationship over several semesters or several years with a particular tutor. In other educational contexts this type of role can be known as a counselor or facilitator.
13) Courses offered as part of a study programme that links directly to the theme, semester and project work of the students. Students choose to take a project course based on the relevance of the course to the work on the project. In some educational contexts, what is defined here as a course could be known as a subject.
14) Courses are required to be conceived as part of a study programme that introduces students to the concepts, theories, or fundamental abilities of a particular discipline. These courses are evaluated (examined) separately from the project courses and project work. In certain educational contexts, what is defined as a course could be known as a subject.

3. METHODOLOGY

3.1 METHODOLOGICAL FRAMEWORK

The purpose of this report is to make a comparative analysis of problem-based learning in the partner countries of the European Union: Denmark and the UK and how to implement the method given in the University B.P.Hasdeu. For this purpose, a methodology has been developed. It aims at exploring the relationship between the internal structures of universities and the study programmes, including how the elaboration and support of the study programme are integrated across the university. The cohesion of the elaboration of the study programme with its support will be examined at different levels of the institution: the level of the system, the level of management of the university, of the faculty, as well as the level of the study programme. Also, issues related to the integration of groups of disadvantaged students as well as the available physical environment will be studied.

It is worth mentioning that a workshop organized in Chisinau from 19-22 January 2016, attended by representatives of the University of Aalborg (Erik de Graaf, Claus Spliid, Lars Peter Jensen), Denmark, as well as the representatives of six universities from the Republic of Moldova, including the State University, was of particular importance in understanding the essence of problem-based learning. Within this workshop were discussed in detail the features specific to the PBL method, the importance and necessity of introducing this method at the universities of Moldova.

In order to achieve favorable results, the research activity was structured in several stages, namely:

- Analyzing the literature and identifying the particularities of implementation and use of problem-based learning.
- Analyzing the institutional context of integrating the study programme (*Entrepreneurship and Business Administration*) at the University B.P.Hasdeu.
- Collecting and analyzing data derived from normative acts that directly or indirectly regulate the higher education system, statutes and other institutional acts of universities in Denmark and the UK.
- Performing a comparative analysis of the criteria, highlighting common points and differences between the three universities.
- Elaboration of a pilot study programme for the implementation of PBL methodology at the University B.P.Hasdeu.

3.2 DATA COLLECTION

In order to collect primary and secondary data, study visits were made at the AAU University in Denmark and the UoG University in the UK. Also, the relevant information from the websites of the specified universities was used, the literature was consulted. Some details have been specified via e-mail.

As a result of the study visits, reports were produced for each university by each person, and the materials, together with the analyzes, were used to prepare WP3. The purpose of this report is to make a comparative analysis of problem-based learning in the partner countries of the European Union: Denmark and the UK and how to implement the method given in the University B.P.Hasdeu. For this purpose, a methodology has been developed. It aims at exploring the relationship between the internal structures of universities and the study programmes, including how the elaboration and support of the study programme are integrated across the university. The cohesion of the elaboration of the study programme with its support will be examined at different levels of the institution: the level of the system, the level of management of the university, of the faculty, as well as the level of the study programme. Also, issues related to the integration of groups of disadvantaged students as well as the available physical environment will be studied.

3.3 DATA ANALYSIS

In order to collect primary and secondary data, study visits were made at the AAU University in Denmark and the UoG University in the UK. Also, the relevant information from the websites of the specified universities was used, the literature was consulted. Some details have been specified via e-mail.

Table 2: Study visits to EU partners / universities

Nr d/o	University visited	Period	People involved
1.	Aalborg University, Denmark	February 8-12, 2016	A. Popa L. Roşca-Sadurschi
2.	University of Gloucestershire, United Kingdom	February 29 - March 4, 2016	L. Roşca-Sadurschi S. Gîrneţ
3.	Aalborg University, Denmark	November 7-18, 2016	L. Roşca-Sadurschi S. Gîrneţ, Vulpe O., Noni L.
4.	University of Gloucestershire, United Kingdom	February 13-24, 2017	A. Popa L. Roşca-Sadurschi, Todos I.
5.	University of Siegen,Germany	April 10-16, 2016	Todos Irina Noni Ludmila
6.	KTH Royal Institute of Technology in Stockholm, Sweden	September 25-30, 2016	Popa A Vulpe Olesea

As a result of the study visits, reports were produced for each university by each person, and the materials, together with the analyzes, were used to prepare WP3.

4. BACHELOR'S DEGREE IN ENTREPRENEURSHIP AND BUSINESS ADMINISTRATION (BUSINESS AND ADMINISTRATION) AT THE STATE UNIVERSITY „B.P.HASDEU" OF CAHUL

4.1 INTRODUCTION

The State University "Bogdan Petriceicu Hasdeu" of Cahul was established by the Government Decision of the Republic of Moldova no. 519 of June 7, 1999. Since 17.01.2003, following the changes made in the founding acts, the institution is named State University "Bogdan Petriceicu Hasdeu" of Cahul. Embeded in the structure of the education system of the Republic of Moldova, the University is identified by:

Nume - *Universitatea de Stat „Bogdan Petriceicu Haşdeu" din Cahul*; **emblemă, sigiliu, antet propriu; sediu** – Piaţa Independenţei nr.1, Cahul, MD-3909, Republica Moldova, pagina web: www.usch.md. **Ziua Universităţii** se sărbătoreşte anual la **7 iunie**.

Name - *State University "Bogdan Petriceicu Hasdeu" of Cahul*; **emblem, seal, own header; headquarters** - Piaţa Independenţei, No. 1, Cahul, MD-3909, Republic of Moldova, web page: www.usch.md. **University Day** is celebrated annually on **June 7**.

In accordance with the Education Law Nr. 547-XIII of 21.07.95, the Law of the Republic of Moldova on the evaluation and accreditation of educational institutions in the Republic of Moldova nr.1257 - XIII of 07.16.97, and the Regulation on the evaluation and accreditation of educational institutions approved by the Law of the Republic of Moldova on the approval of the Regulation on the evaluation and accreditation of educational institutions no. 423-XIV of 06.04.99 in 2006, 11 specialties were evaluated at the State University „Bogdan Petriceicu Hasdeu" of Cahul, by the Department of Accreditation of Higher Education of the Ministry of Education of the Republic of Moldova. As a result of the evaluation, according to the Decision of the College of the Ministry of Education, no.14.8.1. as of November 30, 2006, the university was awarded the **Accreditation Certificate no. 000127, AU series**.

The State University „Bogdan Petriceicu Hasdeu" of Cahul operates under the *Law on Education no. 547-XIII of 21.07.95, the Education Code of the Republic of Moldova no. 152 of 17.07.2014, as well as other acts in force* regarding the scientific and methodological-didactic activity of the higher education institutions.

The teaching activity within the University is carried out in accordance with the legislation in force and is performed by **qualified teaching staff**: *university professors, associate professors, senior university lecturers, university lecturers, university assistants.* Starting with September 1, 2005, the education process in the university is organized according to the European Credit Transfer System (ECTS), so new educational plans for **the first cycle, Bachelor's degree studies**, were developed. The study programmes are authorized and operate according to the normative acts in force, correspond to the national qualifications framework.

The important changes that took place in the last 10 years are due to the Republic of Moldova's accession to the Bologna Process on 19 May 2005, the transition from 1 September 2005 to the cycles of university education and the application of ECTS. The approval of the framework plan has

led to the development of study programmes in the new format, which brings with it the further implementation of the transferable credit system.

The educational process within the USC is organized on years of study in the forms of education as follows: full-time education; part-time education; languages of instruction: Romanian, Russian.

4.2 SYSTEM LEVEL

According to the normative acts in force, approved by the Ministry of Education, the external evaluation of the study programmes is not carried out by the higher education institutions.

The external quality evaluation activity for authorization of provisional functioning and accreditation of study programmes and institutions of vocational education and training, higher education and continuous training is carried out by the National Agency for Quality Assurance in Professional Education, hereinafter referred to as ANACIP.

The Agency is an administrative authority with legal personality autonomous to the Government, independent in decision-making and organization, financed from the state budget (2015-2016) and from own revenues. The Agency is a legal person, has a stamp with the State Coat of Arms of the Republic of Moldova and its name in Romanian, treasury accounts, financial and material funds.

The mission of the Agency is to develop and promote quality culture in the field of vocational education and training, higher education and continuous training, contributing to the enhancement of economic competitiveness and social cohesion in the Republic of Moldova.

The Agency shall be composed of:

1) Governing Board;
2) Profile Committees;
3) Administrative apparatus.

The Governing Board of the Agency is the collective governing body that assures the development and implementation of the Agency's strategy, it consists of 15 members: 13 staffs with scientific-didactic and scientific positions in higher education and vocational education and training or in research, one student representative and a representative of the business environment. The members of the Governing Board are selected through an open international competition, for a four-year term, with the possibility to be re-elected for a maximum one more term.

On April 13, 2016, at the Government meeting, the Methodology for external quality evaluation for the provisional authorization and the accreditation of the study programmes and of the vocational education and training, higher education and continuous training institutions, elaborated by the National Agency of Quality Assurance in Professional Education, was approved in accordance with the provisions of the Education Code.

In order to ensure the functionality of the Methodology, 8 External Quality Evaluation Guidelines for the evaluation of study programmes and vocational education and training, higher education and continuing education institutions were developed. These guidelines are intended to provide methodological support for the development of self-evaluation reports, containing process

procedures and external evaluation steps, the outcomes of external evaluations and information on standards, criteria and evaluation indicators. By default, the Guidelines, through the standards they regulate, will set the minimum level required for provisional authorization and / or accreditation of study programmes and educational institutions, as well as benchmarks for the continuous improvement of educational services.

The information is available on the ANACIP website - www.anacip.md

The external evaluation for provisional authorization starts with the establishment of a new educational institution; changing the organization form of the educational institution; initiating a new study programme; other cases provided by the legislation in force, to prove the existence of resources, facilities and institutional structures.

The external evaluation for accreditation takes place after the first graduation for vocational education and training and higher education or at the end of five years of authorization for continuous training.

4.3 UNIVERSITY MANAGEMENT LEVEL

❖ The structure of the university

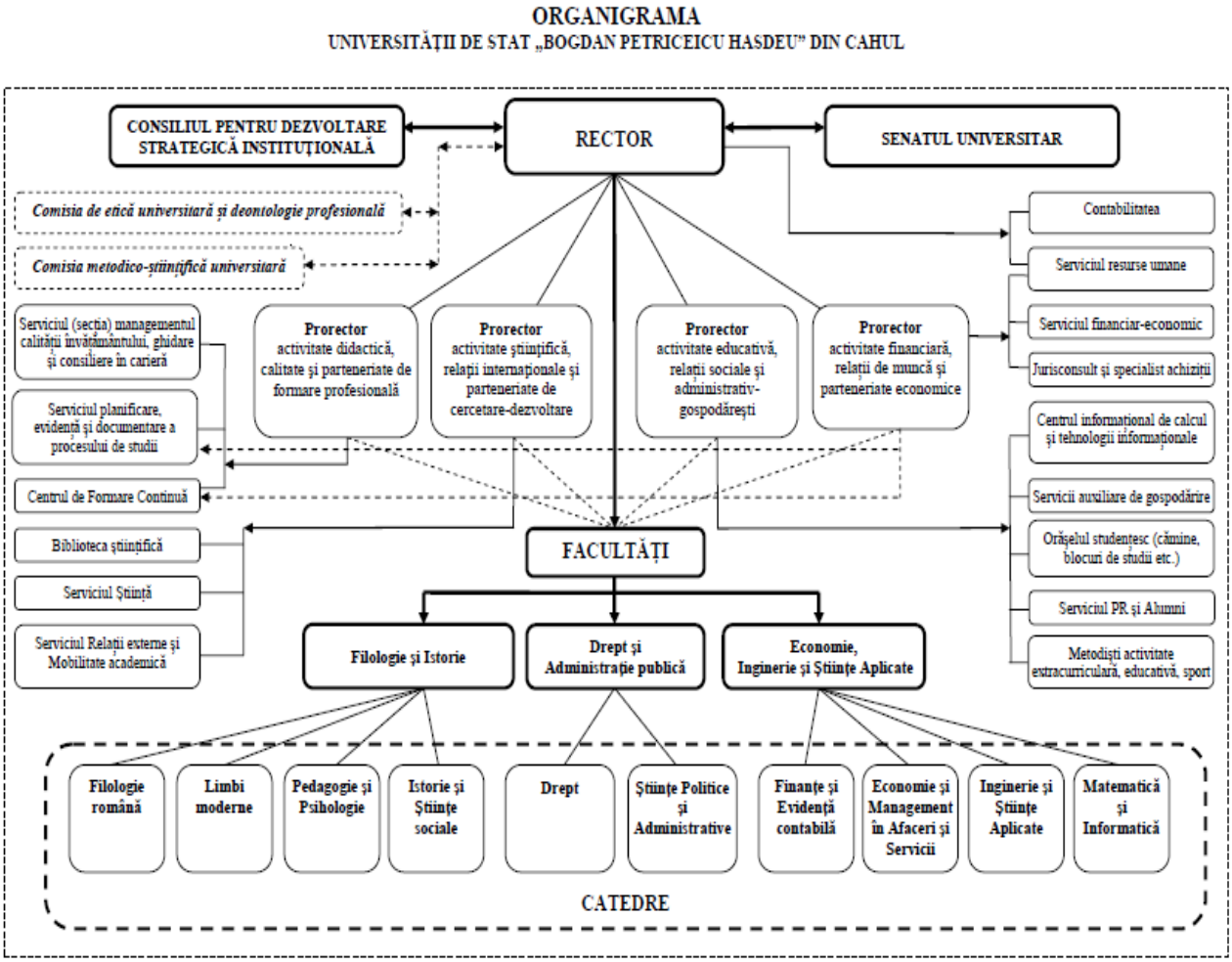
The system of the governing bodies of SUC consists of *the Senate, the Council for Strategic Development of the Institution (CDSI USC), the Scientific Council, Faculty Councils, Administration Council and rector of the institution.*

The SUC Senate represents the supreme collective governing body consisting of scientific, didactic and non-didactic staff, elected by the secret vote of the teaching staff of the faculties, departments, scientific centers, students elected by academic groups and student associations, representatives of the trade unions in accordance with the institutional regulation elaborated on the basis of a framework regulation approved by the Ministry of Education. The Rector, Vice-Rectors and the deans are ex officio members of the Senate.

The mandate of the Senate is 5 years, synchronized with the rector's term of office. The duration of the mandate of Senate members from among the students is one year, with the possibility of renewing the mandate.

The operative management of the University between Senate sessions is carried out by the **Senate Bureau** composed of *the Rector, Vice-Rectors, Scientific Secretary of the Senate, with the support of the Administration Council.*

Figure 1: The organizational structure of SUC B.P.Hasdeu



The Council for Institutional Strategic Development of the University is the dual governing body, which brings together the representatives of the academic community, on the one hand, and the representatives of the Founder, Ministry of Education, Ministry of Finance, as well as external experts, on the other hand, in order to ensure the achievement of the university autonomy under the conditions of public accountability established by the Education Code.

The governing body of the faculty in the SUC is the **Faculty Council**, which is elected for a term of 5 years. The duration of the mandate of the members of the Faculty Council from among students is one year, with the possibility of renewing the mandate.

The Rector exercises the ***Executive Management of the University*** and is responsible for organizing and carrying out the entire activity of the University, for strict observance of discipline and legislation by staff and students.

In the direct subordination of the rector there are organized and operating: a) the Rectorate (the Vice-Rectors, the Scientific Secretary of the Senate); b) SUC Chancellery; c) the Secretariat of the Rectorate; d) Human Resources Service; e) Legal (Legal Advisor) and Public Procurement Department; f) Planning and Finance Service; g) Accounting; h) Information and Communication Service; i) SUC's Publishing House; j) SUC's Typography, other functional administrative units of the university management level.

❖ The mission

The State University ”Bogdan Petriceicu Hasdeu” of Cahul assumes the general mission of scientific research and education, generating and transferring knowledge to society through:

a) creating, preserving and disseminating knowledge at the highest level of excellence;
b) scientific research, development, innovation and technology transfer, through individual and collective creation, as well as the valorisation and dissemination of their results;
c) training of highly qualified specialists on the national and international labor market;
d) creating lifelong learning opportunities;
e) preservation, development and promotion of cultural-historical national values in the context of cultural diversity.

SUC assumes its own catalyst mission in the development of society in general and in the southern region of the Republic of Moldova in particular by creating an innovative and participative scientific and learning environment, transferring competencies and knowledge to the community through education and consulting services that it offers to partners from the economic and socio-cultural environment.

The accomplishment of the USC mission is materialized in:

a) the organization of higher education programmes, including educational and scientific research activities, provides training in an academic or professionally advanced field, in accordance with the normative framework in force.
b) the initial and continuing training of qualified and highly qualified human resources;
c) promoting advanced scientific research;
d) developing the critical thinking and creative potential of the members of the university community;
e) the creation, hoarding and spreading the values of human culture and civilization;
f) promoting multicultural and plurilingual interferences;
g) the assertion of national culture and science in the world value chain;
h) the development of society within a rule of law, free and democratic state.

The mission of the State University ”Bogdan Petriceicu Hasdeu” of Cahul is in line with the legal framework and is oriented towards the integration of the institution into the unique European educational area, being a regional center for the provision of educational and academic services that meets the demand for specialists and innovative products for organizations and communities in the southern part of the Republic of Moldova.

❖ University objectives

The University is a scientific and cultural center of continuous training, whose main purpose is to promote the educational policy of the Republic of Moldova and ensure the quality education process, the development of a democratic, humanistic, flexible and transparent university education based on the values of culture and of national and universal science, achievable by:

- *promoting* the Bologna Process and strengthening the implementation of ECTS, SNCS, targeting the efforts of university teachers towards achieving quality, this being the

characteristic feature of university activity that is geared towards meeting society's expectations;

- *providing* localities in the southern part of the country with highly qualified staff both for the positions of teachers in gymnasiums, general education schools, high schools and for various fields of production, culture or administration; contributing to the personal opening of students and teachers; the formation of the own innovative and creative personality, initiative in thinking and solving new socio-economic problems etc.;
- *formation and achievement of general competences* related to: *knowledge and understanding* (knowledge and proper use of the notions specific to the discipline); *explanation and interpretation* (explanation and interpretation of some ideas, projects, processes, and the theoretical and practical content of the discipline); *implementation (designing, conducting and evaluating specific practical activities);* the use of some investigative and implementation methods, techniques and tools; attitudinal skills (manifestation of a positive and responsible attitude towards the scientific field); cultivating a scientific environment centered on democratic values and relationships; promoting a system of cultural, moral and civic values; optimal and creative valorisation of own potential in scientific activities; engaging in partnerships with other people - institutions with similar responsibilities; participation in own professional development;
- *continuous professional training* of human resources through various ways (participation in conferences, seminars, academic mobility of students and teachers, etc.), post-graduate studies, elaboration of analytical programmes, support for courses, etc., formation of flexible behavior, adaptable to new socio-economic conditions;
- *organizing* didactic activities in the spirit of democratic values, academic standards and freedom, openness towards didactic-scientific integration in the national and international university community in the spirit of European culture and civilization; continuous promotion and modernization of teaching technologies and strategies and modern assessment technologies to help transform students into active subjects of their own becoming and intellectual, cultural and moral personality training; defending the basic principles of democracy;
- *performing* fundamental and applied scientific research for the national economy so that specialists will have modern technologies in scientific investigations; the dissemination and implementation of the results of scientific research, of the contemporary educational technologies in order to facilitate the solution of the problems of education, science, entrepreneurship etc.;
- *improving the analytical programmes* for the continuous training and formation of the specialists in all specialties of the university, targeting them on competences and not on content, with concrete indication of the tasks of the individual activity of the students in each discipline;
- *the activity of the Center for Continuing Education* where educational and counseling services are provided to teachers in pre-university education from the southern districts of the republic. Through its activities, the *Center for Continuing Education* promotes the concept of learner-centered education, changing the emphasis in the educational instructive process on the studen as an object of subject education, an active participant of his / her own becoming as a personality;

- *organization of Master's degree studies*, collaboration, in the forms authorized by the legislation in force of the Republic of Moldova, with other related organizations and institutions in the Republic and abroad.

An important aspect of the organization of the instructive-educational process within the university is the assessment of the results of the educational process etc. The evaluation allows to see to what extent the objectives were achieved: the educational plans and the content of the analytical programmes, which knowledge, abilities and skills were acquired by the student. Estimation is made in a number of ways: evaluation of the organization of the teaching process, assessment of the activity of the academic staff, and assessment of the students' learning activity, in the light of the evaluation regulations on teachers activity and the student learning activity from the perspective of the student-centered education.

❖ Quality management system

The QMS contains references to the responsibility of the university management, how it assumes this responsibility by defining and pursuing its strategy, quality policy and objectives, providing the resources needed to achieve it, institutionalizing the activities of the institution to meet the requirements and expectations of the internal and external stakeholders, the creation of an environment in which the whole staff is encouraged to perform, assuming individual responsibility for fulfilling its mission and objectives, identifying, keeping under control and continuously improving the processes carried out in the institution, introducing some mechanisms for internal evaluation of performance on all dimensions of the activity, so that the existing non-conformities can be corrected and the possibilities for improvement are implemented.

Considering the university as a complex system consisting of faculties, chairs / departments, sections, library, the management of the State University "B.P.Hasdeu" of Cahul carries out a systemic approach to quality management. Each faculty / section / department has a well defined status and constitutes an entity within the quality management system, being characterized by functional links with other entities and systems. This approach allows the management to be involved at all levels in the continuous implementation and improvement of QMS, by understanding customer needs and acting for meeting them.

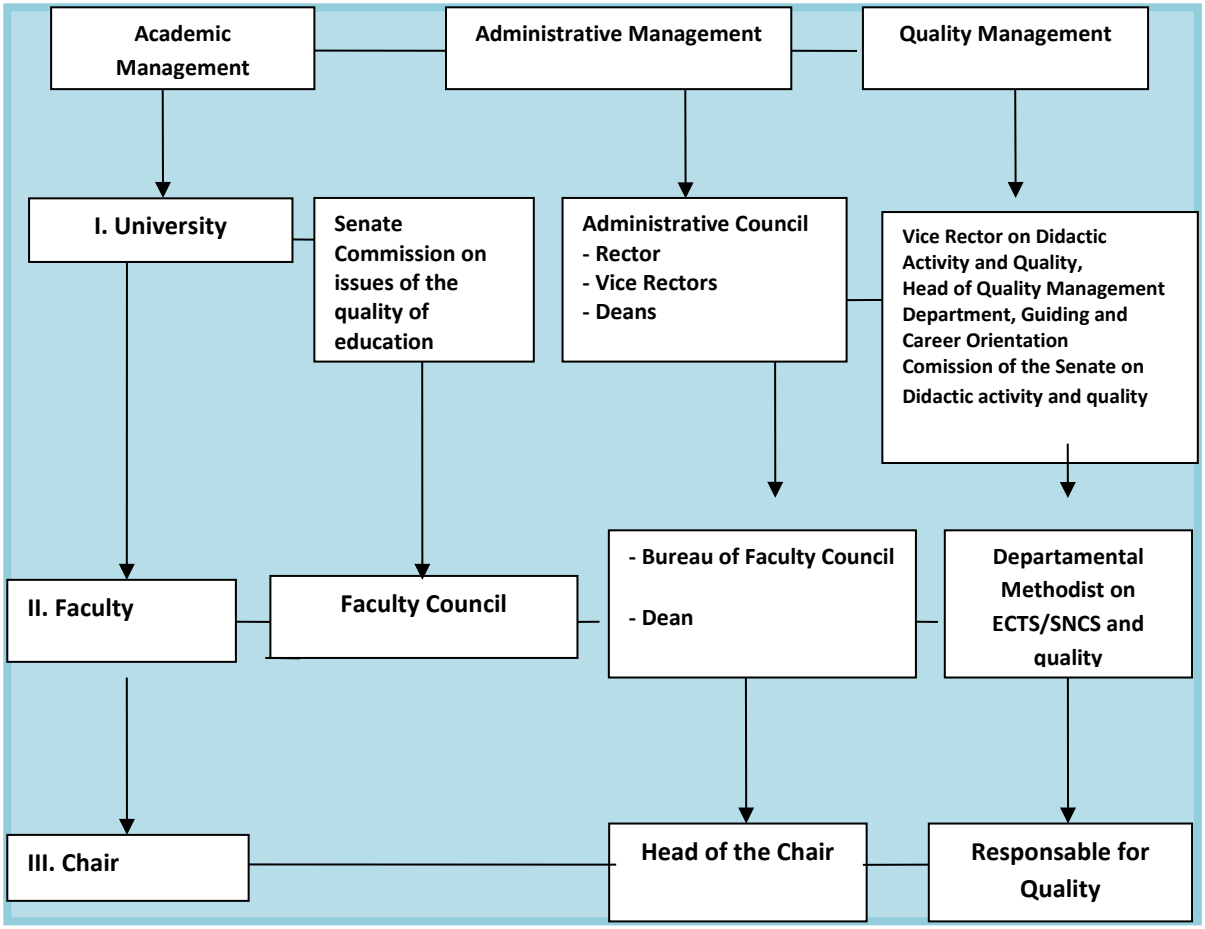
The process-based approach to the implementation of the quality management system involves the following activities:

- identifying the processes necessary to obtain the desired result;
- establishing succession and interaction of processes;
- identifying the interactions between the processes and the functional structures of the institution;
- establishing methods for tracking, analyzing, controlling and improving performance;
- continuous improvement according to the PDCA cycle (*Plan - Do - Check - Act*).

The management of the State University "B.P. Hasdeu" of Cahul is the one that sets its policy on the quality of studies and teaching. The University management is responsible for the overall quality of operations and results. The dean of the faculty, the heads of the department are responsible for the operational and qualitative results of their own units. These include planning (developing procedures, specific regulations), monitoring and continuously improving the quality of education

and research processes, the use of related resources in these sectors; Quality Management Section / Study Section that has the mission to implement, coordinate and monitor the functioning of the quality management system at university level.

Figure 2: Quality Management System at SUC B.P.Hasdeu



4.4 FACULTY / DEPARTMENT LEVEL

The ***faculty*** is the basic teaching, scientific and administrative functional unit of the SUC, which operates in accordance with the SUC Charter and Instructions (regulations, decisions, orders / provisions), as well as regulatory acts of the Ministry of Education and the provisions of the legislation in force.

The faculty aims at organizing and carrying out the instructive-educational process, performing the methodical, educational and scientific research activities for one or more domains / specialties.

The Faculty has the following tasks:

a) training of qualified personnel through higher education (Bachelor and Master's degree studies);

b) coordinating the didactic and research activities of chairs / departments and other subdivisions, and implementing their results;

c) *training of specialists through full-time education, part-time education, distance learning, individual studies and continuing professional training programmes;*
d) *ensuring the quality of studies and scientific research.*

A faculty may include several chairs / departments, methodical-practical centers, scientific-didactic laboratories and other subdivisions that are responsible for organizing study programmes by types and cycles of university studies, and conducting research activities.

The organizational structure of the faculty is flexible, being determined by the strategy of the majority of the members. The activity of the faculty is regulated by the Regulation of the faculty, approved by the SUC Senate, and the provisions of the University Charter.

The faculty, through the decision of the faculty council, establishes its own mission and strategic objectives, based on the general mission of scientific research and education and the strategic objectives assumed by SUC through the University Charter, and adopts the Annual Activity and Development Plan of the Faculty, based on the institutional strategic development, approved by the University Senate.

The ***chair / department*** is a fundamental structural subdivision of the SUC, which operates on the basis of the legislation in force, the University Charter and the SUC instructions.

The chair / department is the functional academic unit that ensures the production, transmission and valorisation of knowledge in one or more specialized fields, and aims at organizing and carrying out at a high level the didactical and scientific, methodological and consultative activities at one or more related course units. The department usually provides several study programmes (specialties).

The chair / department has the following tasks:

a) *the design, organization and realization of the didactic process;*
b) *organizing the scientific researches of the teaching and scientific-didactic staff and of the students of the 1st-2nd cycles of higher education;*
c) *evaluation of the didactic, methodological and research activities of the teaching and scientific-didactic staff and the students of the 1st-2nd cycles of higher education;*
d) *methodological assurance of the didactic process;*
e) *ensuring the quality of studies;*
f) *providing students with educational activities.*

The chair / department may comprise methodical-practical centers, scientific-didactic laboratories, workshops, in-depth extracurricular study centers (including legal clinics, resource center for psychological health, etc.) - aimed at deepening the learning process.

The chair / department develops its own teaching and scientific-didactic staff positions, as well as scientific and technical staff.

With regard to the didactic aspect, the chair / department is a complex structural unit that assures the totality of didactic activities (lectures, seminars, practical and laboratory workshops, internships, individual guidance of students) and includes university professors, associate professors, university lecturers, assistant lecturers, PhD students and technical staff in the number and proportion that allows for the optimal realization of the didactic process.

The staff structure of the chair comprises, as a rule, 10-30 didactic and scientific-didactic positions.

Chair / department responsibilities:

a) participation in the elaboration of training concepts at different levels of education or at different course units (disciplines), as well as in drawing up curricular documents of the study programmes (educational plans, curriculum of the specialized programme and the files of the discipline, etc.);
b) promotion at a high scientific-methodological level of the fundamental courses, special courses, seminars, practical and laboratory works;
c) organizing and conducting the scientific researches of the didactic and scientific-didactic staff and of the students of the 1st-2nd cycle of higher education;
d) implementing the research results, including in the didactic process;
e) organizing internships for students;
f) organizing the individual work of the students;
g) organizing the current and final assessments of the course units and completion / final assessments according to the educational plan;
h) conducting the process of elaboration and defence of the students' annual, Bachelor and Master's degree theses;
i) informational and methodological assurance of the teaching process: elaboration of methodological recommendations, didactic materials, textbooks, dictionaries etc .;
j) carrying out scientific researches under projects or by order, on a contract basis, etc., according to the scientific activity plans of the chair / department and the individual activity plans of the teaching and scientific-didactic staff;
k) examination of doctoral theses, habilitate doctor's thesis presented at the faculty, etc.;

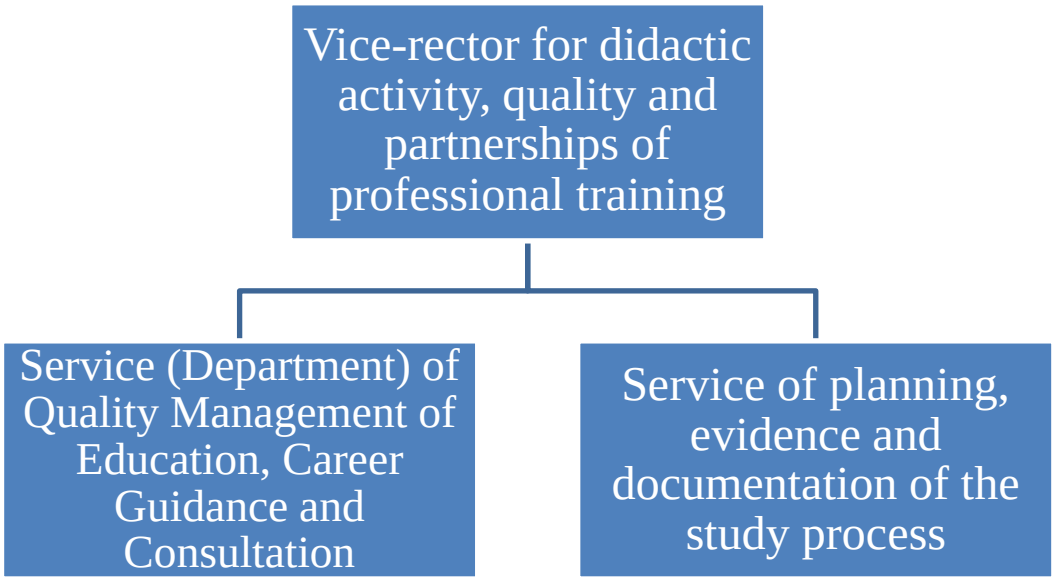
The executive management of the chair / department is carried out by the head of the chair / department who is elected in accordance with the Regulation on the organization and functioning of the governing bodies approved by the University Senate on the basis of the University Charter and the legislation in force.

The activity of the chair / department is regulated by the Chair / Department Regulation, approved by the SUC Senate, and the provisions of the University Charter.

The chair / department establishes its own mission and strategic objectives, based on the overall mission of scientific research and education, and the strategic objectives assumed by the SUC through the University Charter, and adopts the Annual Work Plan of the chair / department based on the institutional Strategic Development Plan, approved by the University Senate, and the Annual Activity and Development Plan of the Faculty.

4.5 STUDY COUNCIL LEVEL

Within the SUC, the functions, duties and responsibilities of the staff involved in the teaching, learning and management process as well as the existing relationships are determined by the existence of a well-defined and determined organizational structure, relations expressed in the **organizational chart.**



The Service (Department) of Quality Management of Education, Career Guidance and Consultation is the administrative functional unit that:

a) ensures the implementation of quality standards within the SUC;
b) makes proposals for improvement of the evaluation activity and quality assurance in accordance with national and European standards;
c) carries out quality audit programmes at SUC, faculty and department level;
d) provides the necessary information for the quality assessment in SUC and publishes reports on quality assurance in SUC;
e) provides concultancy and guides the self-evaluation activities and follow-up self-evaluation reports in accordance with national reference standards and requirements established by the National Agency for Quality Assurance in Professional Education or another quality assessment agency registered in the European Register for Quality Assurance in Higher Education;
f) provide career guidance and career counceling to SUC students and graduates as well as other members of the academic community;
g) other activities specific to its area of responsibility.

The ***Service of planning, evidence and documentation of the study process*** is the administrative functional unit that ensures:

a) planning of the study process schedules, study formations, teaching positions;
b) recording students' quota;
c) issuance of draft orders on students promotion, graduation, expell, transfer, etc.;

d) issuance of documentation of interest to central and local public authorities, and specialty public authorities / bodies / services;
e) documentation of students and graduates;
f) keeping documentation related to admission, study process and academic achievement;
g) issuance of study documents (diplomas);
h) other activities specific to its area of responsibility.

The training of specialists in this field is done in accordance with the study programme that is materialized in the educational plan, the university curriculum, the organization of the students and the teaching staff, the academic quality assurance system.

❖ Educational plans

One of the basic elements of the training process is the Educational Plan, a regulating document, which reflects the general and reference objectives of the content of the education for a specific specialization. It represents a unitary view of the whole teaching-learning-evaluation activities and their achievement over time in order to train a highly qualified specialist.

The current educational plan for the BA study programme focuses on the following objectives:

a) *the general objective:* to cultivate the personality of the students according to the general human values;
b) *special objectives:* to develop / train skills, capacities and attitudes according to the chosen theoretical and applied domain and the specialization objective; orientation of students towards fields that capitalize the general and particular background of specialization sciences;
c) *concrete objectives:* to master the fundamental concepts and strategies required in the requested field, which offer the possibility of professional integration.

Having as a major objective the training of a specialist able to structure and perform a wide range of activities, the university trains students, according to the necessity of the regional economy, to the imperatives of time.

The content of the educational plan is in accordance with the mission and objectives of the BA study programme, as well as its temporal, formative, accumulation and evaluation dimension. The coherence between the learning outcomes of the learning process and the objectives of the educational plan was proven by: the logic of organizing and ranking university subjects integrated into the educational plan; analyzing the relationships between the fundamental, general and special disciplines, with openness to practice; analyzing the existing links between compulsory, optional and free choice disciplines; the connection between the deepening of the specialty and the thickening of the common trunk of the general and special subjects.

Improvement of educational plans is a continuous process. Admission to new specialties, the imperatives of the Bologna process, require the revision of existing plans and the development of new projects. The updating of the eduucational plan is carried out in the following ways: updating of the studyprogrammes; introduction of new optional and free choice subjects; modifying the educational plans in accordance with the requirements of the Ministry of Education.

The members of the chair actively took part in drawing up and updating the plans. At the suggestion of the chair, of the methodological committee, the educational plans have undergone qualitative changes. The review of the structure and content of the new plans was made in the light of the current requirements for the training of specialists who should withstand the conditions of market competition, with the decrease of the number of hours in some disciplines, the decrease of the number of groups, etc.

❖ Curricular programmes

Considerable work was done by the department's staff in the elaboration of the curricular programmes according to the European standards, where there were clearly reflected the reference objectives of the discipline and the outcomes of the course; teaching-learning-assessment methods; benchmarks on the content of courses and seminars; requirements regarding the student's portfolio; systems and tasks for the individual work of the student; the bibliography provided for the course and seminar.

In the curricular programmes there are indicated the subjects for the courses, seminars, a special space is reserved for the individual work with the students in accordance with the objectives set in this context. Bibliographic sources must be indicated in order to perform the individual work.

The curriculum of the discipline or the curricular programme is the regulatory document at the level of a university discipline. In this respect, the disciplinary curriculum can be regarded as a standard of learning within a concrete discipline.

❖ The teaching-learning-assessment process

As a practical and dynamic dimension of the education system, the educational process represents the specific context in which the training takes place. As the main subsystem of the education system, the educational process ensures: the design of the general and specific objectives according to the criteria established at the level of the outcomes; the organization of the training content in order to achieve certain teaching and learning goals, evaluated at different time intervals; the methodological realization of the didactic activity; the evaluation of the results at different time intervals, at the beginning and end of the activity and throughout it. The education process is carried out according to the educational plans.

Didactic strategies applied in the educational process

In order to develop the competencies necessary for the students through achieving the set up objectives, the teachers use different didactic strategies depending on the specificity of the taught course: inductive strategies, whose teaching approach is from the private to the general; deductive strategies (inverse to inductive ones): from general to particular; mixed strategies: inductive - deductive and deductive - inductive; algorithmic strategies: explicative demonstrative, intuitive, programmed and algorithmic ones; strategies for the development of knowledge through his / her own efforts of thinking, etc.

Teachers design student-centered learning environments with less emphasis on the traditional responsibility to transmit information only. In this respect priority is given to the active-participatory

methods meant to transform the student from the object into the subject of learning and his / her own professional becoming. Among the interactive methods most often applied by the teachers we can mention: clustering, gallery tour, SWOT technique, Venn Diagram, Brainstorming, Method 6-3-5, Philips 6/6, case study, Think - Pair - Present, rotating communication, cube technique, problem-solving, simulation, hypothesis formulation, role play, case study, etc.

Use of information technology in the training process (e.g. e-mail, personal webpage, electronic resources, etc.)

In order to diversify the methods of teaching and facilitate communication with students, technical means are used in the teaching process, the courses are presented in PowerPoint format. Attempts are being made to teach online courses. Audiovisual means, interactive boards, internet sources, web pages and also the MOODLE platform are used in the teaching of some disciplines.

Organizing and conducting students' individual work

Designing and organizing the individual work of the student for the acquisition of the necessary competences in the subject matter is an important structural component of the curriculum by subject. We believe that it is necessary to train, educate academic autonomy and the culture of the student's individual work in auditors, laboratories, libraries, and cultivate their responsibility for studies, for the results obtained. *Students' individual work* is done through various interactive forms guided by the teacher: the individual study of some themes, which complements the basic content of the subject, analyzes and case studies, essays, portfolios, problems / tasks design and solving, individual scientific research activities; analysis and synthesis of scientific papers, simulations and many other activities.

The ratio of the number of direct contact hours between the teacher and the student and the individual work is 1: 1 or 1: 2 in the first cycle, Bachelor's degree studies, and 1: 3 in the second cycle, Master's degree studies.

Internships

Internships are a component part of the educational process that ensures the realization of the fundamental principles of the initial professional training process and dynamic of the act of acquiring professional behavior. They represent the interference between the study process and the professional activity, are a first proof of adaptation and integration in the professional field. The activity of conducting the internships by BA students took place in accordance with the educational plans, as well as the Regulations for organizing and carrying out the didactic process in the higher education institutions of the Republic of Moldova and the Regulation regarding the internships of the students of the State University "B. P. Hasdeu" of Cahul.

The assessment method is the exam, where the students submit and present their internship dossier which is assessed by the internship supervisor at the chair, taking into account the assessments of the tutors from the institutions where the internships took place. Subsequently, a commission is formed in which the students have to take an exam on the internship performed.

Assessment of students learning activity

Assessment of learning outcomes is done in accordance with the Regulation on Assessment of Student Learning Activity. The form of assessment for each discipline is stipulated in the

educational plan, and the way (oral or written) is decided by the chair. Each teacher announces at the beginning of the courses how the evaluation of students activity will take place. Students are informed about the number of credits granted for the subjects they are studying and about the conditions of graduation according to the Regulation for organizing studies in higher education based on the National System of Study Credits, displayed in the notice and published on the university's website.

For the systematization and improvement of the process of assessment of the student learning activity in each semester of study, two current mandatory assessments are being organized in the weeks 5-7 and 10-12, according to the current evaluation schedules, and the final evaluation is carried out at the end of the semester.

Among the assessment methods used by the departments during the current and final evaluations can be mentioned: the test, the report, the oral communication, the portfolio; docimological tests that were used both in formative and summative assessments, control papers, abstracts, essays. Various types of seminars are also organized: seminar-conversation, seminar on a report basis, situation simulation seminar, round table seminar, practical seminar, etc.

Each programme is monitored by a Programme Director.

4.6 INTEGRATION OF STUDENTS WITH DISABILITIES

The University does not have a center / office specifically dedicated to disabled students, which is why there are no specific responsibilities for teaching staff and management staff, and there is no allocation of resources in that direction. However, within certain limits the institution focuses on the positive solution of the respective problems by creating access to the institution (special ramps), the appointment of persons as "Supervisors on specialties", who have the task of guiding, helping students of the targeted specialties. In order to facilitate the teaching-learning process, the institution has some classes equipped with modern teaching technologies that facilitate access to information for people with disabilities and the disadvantaged ones. For the support of the above mentioned people the so-called social scholarships that students can receive by applying to and completing special forms are provided in the university.

For people with severe disability, but which allows them to perform studies and practice in the chosen specialty, SUC applies the Law of the Republic of Moldova[49] nr. 60 of 30.03.2012. According to the Regulation for the organization and conduct of admission to higher education (first cycle) in the State University "B.P. Hasdeu", these persons are eligible under paragraph 9b and are included in the 15% share of the study places financed by the budget of the state.

4.7 PHYSICAL ENVIRONMENT

At present, the Faculty of Economics, Engineering and Applied Sciences has rooms in Block no. 2, seven equipped laboratories that provide teachers and students with computers, projectors, interactive boards, teaching materials. There are also arranged teachers' rooms, classrooms / seminar

[49] http://usch.md/wp-content/uploads/2015/12/Legea-Republicii-Moldova-nr.-60-din-30.03.2012-privind-incluziunea-social%C4%83-a-persoanelor-cu-dezabilit%C4%83%C8%9Bi.pdf

rooms with all the facilities necessary for conducting didactic and scientific research in good conditions.

Depending on the teaching, research and administrative objectives, SUC has educational and research facilities that comply with safety principles and hygiene requirements in terms of the quality of surface, equipment, technical condition and amount.

The direct organization and management of the training process under the *Business and Administration* study programme is carried out at the Faculty of Economics, Engineering and Applied Sciences of the University. Students have classes in the study block no. 2, located at: Cahul, Dunării Street, 19. The *Information Bibliographic Service, the University Center for Continuous Training; Career Guidance and Counseling Center; the English Language Resource Center; the French Language Resource Center, the German Language Resource Center, the Informational Center for Computing and Information Technologies; the Psychological Counseling Center, the Pro-Europa Center in Cahul; the Romanian Culture and Civilization Center; 2 speaker cabinets located in Block no. 1 etc.*, are also available to the students.

The main concern of the SUC related to the Library is to bring it closer to standards existing in university libraries; this objective is included in the Institutional Development Strategy 2012-2016[50], approved by the Senate of the State University ”B. P. Hasdeu” of Cahul, Minutes no. 6 of 10 May 2012.

The *home loan room* holds a collection of Romanian and Russian documents from all fields of study and research. The members of the university community have access: students, master degree students, PhD students, teaching staff, auxiliary staff, *registered* at the Library, who can borrow at home for a limited period of time.

SUC also has a *multimedia room* that aims at creating, storing and developing electronic information resources in the field of science, education, and culture, as well as promoting access to them. It is equipped with 7 high-performance computers, internet connection. The functionality of this multimedia room is the following: Internet access; ensuring access to the databases of EBSCO, MoldLex; consulting EBSCO CDs from the center’s collection.

The *periodicals room* offers for consultation the current and retrospective editions of periodicals: collections of newspapers, magazines, yearbooks, etc. The publications are from various fields of interest: philology, history, law, culture, economy, entertainment, and so on. It provides free access to the shelf for the latest newspapers: „Capital market”, „Economist”, „Экономическое обозрение”, „Timpul”, „Făclia”, and journals: Economica, Intellectus, Monitorul fiscal FISC. md, Consultant, STUDIA Universitatis Moldaviae, Contabilitate și audit, *Buletinul științific al USC*, etc. The University Library is subscribed to 32 titles each semester, of which 19 current journal titles and 13 titles of current newspapers, 30 titles being in the state language.

The following databases can be also accessed in the Library of the State University ”B.P.Hasdeu” of Cahul: EBSCO - one of the most renowned traditional and electronic journal subscription agencies. EIFL directly provides about 18,000 magazines, newspapers and newsletters with full text. EBSCO databases can be accessed in Multimedia Rooms.

[50] http://usch.md/wp-content/uploads/2015/11/Strategia-USC.pdf

MoldLex - legislative database containing legal acts with normative character published in the Official Gazette of the Republic of Moldova in Romanian and Russian languages. The MoldLex database allows printing or copying of legislative documents on different information carriers.

SpringerLink - covered areas: architecture and design, economics, chemistry, materials science, computer science, environmental science, engineering, humanities, social sciences, law, mathematics and statistics, medicine, physics and astronomy, applied informatics.

The library provides students with books that have been acquired, especially in recent years. To these are added the textbooks and specialized books edited by the teaching staff of the chair, the concern for generating modern related information is slightly increasing.

4.8 STUDY PROGRAMME LEVEL

University study programmes within the USC are structured on study cycles, in accordance with the Education Code and the Framework Plan for Higher Education approved by Order of the Ministry of Education no. 445 from 03.06.2011[51]. In the process of designing the educational it was taken into account the Nomenclature of professional training areas and specialties [52], the National Qualifications Framework [53], the European Qualifications Framework.[54]

In 2015, according to the Order of the Ministry no. 1045 of 29.10.2015 the new Framework Plan for Higher Education [55], was implemented, thanks to which the *Department of Economics and Management in Business and Services*, which provides the *Business and Administration* study programme revised and modified the study plan according to the new requirements.

In the design process, the department is the initiator of the new study programmes. Taking into account the development strategy of the faculty, of the institution and the labor market situation, the initiator formulates the need to start the new study programme.

Therefore, the educational plan of the ”*Business and Administration*” study programme was developed by the Department of Economic Sciences in 2005, after the study programme in the specialty 1802.01 ”Management of the company” was accredited. Subsequently, the Department of Economics and Management in Business and Services, in accordance with the Framework Plan of June 3, 2011, developed a new educational plan for this programme, which was approved at the Chair’s meeting, at the Faculty Council Meeting and at the Senate Meeting, and coordinated with the Ministry of Education. Then, the educational plan for the ”*Business and Administration*” study programme was revised and amended in 2016. When drawing up the educational plan, the provisions of the National Qualifications Framework were taken into account, so that the educational plan ensures the obtaining of the qualification, according to the requirements specified in the NQF, namely: the obtained qualification, the skills trained, and so on.

[51] http://usch.md/wp-content/uploads/2015/12/Plan-cadru-pentru-studii-superioare_2011.pdf
[52] http://usch.md/wp-content/uploads/2015/12/Lege_Nomenclator_domenii-formare.pdf
[53] http://edu.gov.md/ro/content/cadrul-national-al-calificarilor-0
[54] http://usch.md/wp-content/uploads/2015/12/ISCED-2013_domenii-de-educatie.pdf
[55] http://usch.md/wp-content/uploads/2015/12/ordinul_nr._1045_din_29.10.2015_plan-cadru_pentru_studii_superioare_ciclul_i_-_licenta_ciclul_ii_-_master_studii_integrate_ciclul_iii_-_doctorat.pdf

The plan contains several optional subjects, continuously, depending on the dynamic evolution of the field, so that each student has the opportunity to assimilate the knowledge he / she wants, correlated with market requirements.

The list of compulsory and optional course units / modules, the number of hours to study them, the types of internships and the free-choice course units have been established according to the specifics of the general field of study (*36. Economic sciences*), the field of professional training (*363.1 Business and Administration*) in line with the National Qualifications Framework and the European Qualifications Framework. The correlation between the number of hours and credits corresponds to the provisions of the Framework Plan.

When drawing up the educational plan the main objectives of the Framework Plan were taken into account: *general, specific and concrete*. The training under the "*Business and Administration*" study programme takes place in accordance with the Educational Plan, for the 3-year form of education (based on high school, secondary and higher education), registration number *IS-01-1726* of 20.02.2012.

In the plan the fund of hours (course, seminar, practical works) for each discipline and internship is planned. The correlation between course, seminar, direct contact and individual work is 1:1, which corresponds to formal and formative requirements. The year of study is divided into 2 semesters with a brief duration of the 30-week study process, including internships, which is an important stage in the training of specialists.

The use of the ECTS / SNCS system in combination with the requirements set out in the National Qualifications Framework favors the transparency of the learning process and the qualifications obtained within the "*Business and Administration*" study programme and facilitates the recognition of the qualifications obtained.

The educational plan provides for the student to undertake course units / modules from: **a)** ***the fundamental component (code F)***, which aims at acquiring knowledge and forming basic skills, integrated into competencies, allowing the scientific approach of the field of professional training, as well as the understanding and creation of new knowledge**; b)** ***the component of general skills and competences (code G)***, which aims at developing the skills to learn, research, analyze, expose, communicate effectively orally and in writing, including through information technologies, in the field of professional training and in various cultural contexts; **c)** ***the socio-humanist orientation component (code U)*** aims at forming a broad horizon of legal, philosophical, political, sociological, psychological and economic culture that would enable the future specialist to assume responsibilities in a free society and to adapt efficiently and effectively to changes in society.

The forms of organizing the teaching-learning process

In accordance with art. 47 of the SUC Regulation for the Organization of Studies in Higher Education based on the National System of Study Credits (approved by the SUC Senate, Minutes No. 06 of 21.04.2016), the academic year consists of two relatively equal semesters, which include two exam sessions, internships and two holidays. The duration of a semester is 15 weeks of direct contact with the students.

Within the SUC, the teaching-learning-assessment process is carried out according to the Educational Plan elaborated on the basis of the National Qualifications Framework. Full-time

courses are traditionally organized for higher education, according to the educational plans, which provide for the following teaching activities: course, seminar, practical works. The module / discipline can be assimilated by performing the following educational activities: attending the theoretical course / lectures, seminars, performing specific tasks; training abilities in the laboratory; consultation of documentary sources, including information from the Internet; writing reports, theses; performing case studies (individually or in groups); reading books and notes, etc. For independent activity, the educational plans also require students to produce different individual papers: annual theses, reports, portfolios, and so on.

The individual work of the student admitted to this specialty involves: research activity; writting the annual and bachelor's degree thesis; solving various case studies and many other activities organized and evaluated by teachers. The individual teacher-guided study is included in the teaching process and forms part of the student's workload per week in addition to the number of direct contact hours included in the educational plan. The individual teacher-guided study of the student is part of the teacher's didactic workload, carried out in the second half of the day and not covered by hours in the didactic workload performed in the classroom.

The individual teacher-guided study is provided for all course units / modules in the educational plan.

In order to conduct a student-centered education, the members of the departments apply at the seminar the following teaching-learning methods: communication (discussion lecture, debating lecture, heuristic conversation, explanation, problem-solving, intuitive demonstration, etc.); explanation, action-based (practical and applicative works, case study, exercises, simulation of situations, tests, individual activity based on bibliographic material).

Interactive methods are also used: Clustering, SWOT - problem approach, Brainstorming, Method 6-3-5, Philips 6-6, rotating communication, etc.

In the process of organizing and conducting seminars there is contribution to the development of students' creative, critical, creative and active thinking abilities. Various types of seminars are used: seminar - conversation, seminar on a report basis, seminar - situational simulation, practical seminar, seminar - round table, repeating seminar, problematic seminar, synthesis.

The organization and conduct of internships is grounded in accordance with the Framework Regulation on Internships in Higher Education and the SUC Regulation on the organization and conduct of internships. Types of internships are determined in the educational plans in strict compliance with the learning outcomes for the specialist in the respective field of training and they include:

a) specialty (initiation, production);
b) Bachelor's degree internship.

Assessment forms include exams, intermediate assessments, and annual theses. The form of assessment is provided in the educational plan, and the verification modalities are set in the disciplinary curriculum and approved at the departments' meetings, endorsed at the faculty council. For all disciplines, 1-2 current assessments are scheduled, which are reflected in the staudy programmes and are carried out during the semester. For all disciplines provided in the educational plan, the final assessment form is the exam, except for Physical Education whose form of assessment

is ”admitted / rejected” mark. Exams are only held in the examination sessions, according to the study process schedule approved by the SUC Senate.

The bachelor’s degree examination consists of two tests: Integrative exam (including fundamental and specialty disciplines) and public defence of the bachelor’s degree thesis.

Students are involved in the teaching process, answering questionnaires regarding the quality of the study programme. There are and are applied assessment questionnaires by students of all teaching staff and of the courses / seminars taught, which are applied in accordance with the *Regulation on Quality Assessment of Teaching and Scientific Staff*.

Students involved in the governing bodies of the faculty and the university, being elected as members of the Senate, faculty council, participate in making decisions to modify, modernize curricula and teaching-learning methods.

4.9 LEVEL OF PEDAGOGICAL TRAINING

The planning, recruitment, employment and administration of academic staff in the SUC takes place in accordance with the Labor Code, the Education Code of the Republic of Moldova, the Regulation on the way of filling the teaching positions in the higher education institutions. The title list for teaching staff is drawn up annually and is established taking into account the educational plans, groups of students, teaching and research norms.

The organization of the study process in the ”*Business and Administration*” study programme is ensured both by the Department of Economics and Management in Business and Services, as well as by other related departments from the university. The specialized disciplines are held by the professors of the department employed full-time or part-time. Part-time employment is mainly made from the list of university’s teaching staff employed full-time and external people from the real sector employed part-time.

To teach other courses. Teaching staf from other departments are involved: Department of Finance and Accounting, Department of Mathematics and Computer Science, Department of Engineering and Applied Sciences, Department of Modern Languages, Department of Law, Department of History and Social Sciences, Department of Pedagogy and Psychology.

The selection of teachers for these courses is done by specialized departments. For these courses there are organized lectures shared with other programmes provided by the faculty.

Employment of the teaching staff at the chair / department is in line with the normative framework. All scientific and teaching positions at SUC are filled by competition, according to the requirements and procedure set out in the Regulation on the filling of teaching staff positins in higher education institutions. Based on the results of the contest, the University, on behalf of the Rector of SUC, concludes with each employee an individual labor contract for a determined period of 5 years. Teaching staff, employed part-time, meet the general requirements of the post / job set out in the Education Code and are employed in unoccupied teaching positions after a competition, according to the provisions of the Labor Code of the Republic of Moldova.

During its activity, the institution managed to form a motivated team of people. The professional development of didactic, scientific-didactic, scientific and management staff is

mandatory throughout the professional activity and is regulated by the Government. Professional development is continuously carried out in USC by organizing various instructional seminars organized by the Department of Quality Education, Career Guidance and Career Counseling, local trainers of SUC, and others. Teachers actively participate in various professional training programmes through: internships of professinal training in higher education institutions, national and international educational and / or research projects, participate with presentations and / or works at conferences, seminars, symposiums, international exhibitions , academic mobility, etc. As a result of continuing professional training through internships in accredited education and research institutions, the SUC's teaching staff receive professional development credits.

A constant concern of SUC is to encourage and support young teaching staff in attending doctoral studies. This concern will be continued in the coming period, including by providing financial support to teachers who undertake PhD studies for a fee (payment of 1/2 fee by SUC).

The evaluation of the staff involved in the didactic and research activity in higher education is part of the quality assurance system and is carried out periodically in accordance with the Regulations for Quality Assessment of Didactic, Scientific-Didactic and Scientific Staff, approved by the SUC's Senate.

The development of scientific research is a priority objective of the institutional management whose achievement is meant to balance the relationship between didactic activity and research activity and to highlight the mission of the University as an educational and research institution.

At SUC, scientific research is the basis of the higher education process and is a professional obligation of each scientific-didactic, scientific and didactic staff. At institutional level, scientific research is provided by two operational structures: the Department of Science and the Department of External Relations and Academic Mobility.

The SUC's teaching staff organize and participate in various national and international scientific meetings. Certificates of participation, diplomas or copies thereof are collected in the personal file of each teacher which is kept at the Department of Economics and Management in Business and Services.

Every teacher has the freedom to choose an individual research topic, and at the end of each academic year, the teaching staff draws up the academic evaluation reports for the occupation of the scientific-didactic, scientific and didactic functions, according to the Regulation for the evaluation of the quality of didactic, scientific-didactic and scientific staff activity approved by the SUC Senate, in addition to including all the activities carried out, establishes, with supporting documents, the ones mentioned in the report. Thus the correctness and the degree of involvement of the scientific-didactic staff in the research process are evaluated.

5. DATA ANALYSIS AND INTERPRETATION

5.1 INTRODUCTION

In this chapter we will make a comparative study between the Moldovan higher education system and the education systems of the European states: Denmark and Great Britain, highlighting both the similarities and the main differences, thus trying to highlight the weaknesses and strengths of the local system, which can improve and make Moldovan education more efficient.

5.2 COMPARATIVE ANALYSIS: CRITERIA, PROPERTIES AND INDICATORS

Here we present synthetically the comparative situation in 3 universities under the indicators and criteria at each level: SUC (Republic of Moldova), AAU (Denmark), UoG (Great Britain).

Table 6. Cross-case analysis

Criteria, properties, indicators	SUC	AAU	UoG
L1 System level			
1.1.Acreditation of study programmes	For the purpose of accreditation, the Independent Agency ANACIP was founded. At the first stage, the study programmes of the 1st cycle, Bachelor's degree studies, then the study programmes of the 2nd cycle, Master's degree studies. Indicators are developed in order to evaluate study programmes.	The university has already been subject to accreditation on study programmes, so it has passed at a higher level when the University was assessed in its entirety and obtained the university accreditation certificate. Indicators are developed, according to a determined methodology, which allows the evaluation of the university.	The accreditation of the study programmes is done with the involvement of three organizations: the Privy Committee, the Agency for Quality Assurance in Higher Education, the Council for Higher Education Financing in England.
1.2 National quality assurance system.	In the Republic of Moldova, the National Agency for Quality Assurance in Professional Education (ANACIP) is responsible for ensuring an integrated, credible, objective and transparent system of external evaluation and	In Denmark, the Accreditation Agency is also in charge with the quality assurance issues. The structure and functions of the continuous quality assurance system in the university are predetermined by the criteria defined in general	In the UK, the national quality assurance body is the Quality Assurance Agency for Higher Education (QAA).

Criteria, properties, indicators	SUC	AAU	UoG
	accreditation of institutions and study programmes.	in the University Act and in the Order of the Minister ”Criteria for the Revelance and Quality of University Study Programmes and on Procedures for Approval of University Study Programmes”.	
1.3. Professional bodies involved in accreditation.	The study programme Business and Administration does not require accreditation by professional bodies. It is welcomed the opinion of a professional association regarding the usefulness of the educational plan for the economic environment.	There are no professional bodies that contribute to the validation of Business and Administration study programmes or the way they are carried out, but within the university there are advisory bodies at the level of each Study Board, composed of competent and notorious external persons.	The Business Management study programme does not require the involvement of professional bodies in the accreditation process, although there are consultations with the business community.
L2. University management level			
Criterion 1. *University governance, management and organization bodies*	**The system of governing bodies of SUC** consists of *the Senate, the Council for Institutional and Strategic Development, the Scientific Council, the Faculty Council, the Administration Council, and the Rector*. The *operative management* of the University between Senate sessions is carried out by the **Senate Bureau** composed of *the Rector, Vice-Rectors, Scientific Secretary of the Senate, with the support of the Administration Council*.	The university Board and the Rector. It is a unitary management structure.	Governing Bodies: Council, Vice-Rector, Academic Committee, Secretary, Student Organizations. The existence of a university-level service ”Help Zone”, that has the competence to assist, help, guide students throughout their studies, facilitates the educational process.

Criteria, properties, indicators	SUC	AAU	UoG
	The mandate of the Senate is 5 years, synchronized with the rector's term of office.		
Criterion 2. *Institutional strategy of the university, incorporating the curriculum strategy with a focus on student-centered learning*	The quality of studies and the training of graduates for future employment is a priority objective for SUC. These are reflected in the following institutional normative acts: 1. DECLARATION OF THE RECTOR on the policy of the State University „Bogdan Petriceicu Hasdeu" of Cahul in the field of quality for the academic year 2016-2017 2. In the SUC Charter, Chapter VI „Relations with the Labor Market and Business Environment" and Chapter VIII „Quality Assurance and Assessment".	In Aalborg University there is an institutional commitment to learning and innovative teaching that is laid down in the 2016-2021 university strategy, focusing in particular on problem-based learning and student employability.	The UoG's Strategic Plan (2012-2017) provides for the development of student-centered education.
Criterion 3. *Quality assurance bodies at university level*	In order to coordinate quality assurance in the SUC, the Department (section) of the Quality Management in Education, the Department of Career Guidance and Career Consultation have been set up to create a Quality Management System (QMS) based on a policy, organizational structure and procedures to allow continuous monitoring, evaluation and	At Aalborg University there is a Group responsible for quality assurance and development. (University's Steering Group for quality assurance and development). This Group is responsible for systematically supervising internal quality and improving the quality system, developing the quality domains within the university.	UoG is constantly concerned with ensuring a high quality of the entire study process, which would allow the training of highly qualified specialists. In order to achieve this goal, there is a quality assurance management structure, but the supervision of all quality assurance procedures within the University is within the competence of the Academic Council.

Criteria, properties, indicators	SUC	AAU	UoG
	improvement of the quality of all training activities at the State University „Bogdan Petriceicu Hasdeu" of Cahul.		
Criterion 4. *Pedagogical training of teaching staff and their continuous training*	It is obligatory for teachers without pedagogical training to attend the psycho-pedagogical module in the amount of 60 study credits.	A Learning Lab is created at the Aalborg University, which offers pedagogical qualifications obtained through the Adjunktpaedagogikum (national qualification) and the possibility of continuous learning. We also mention the PBL Academy, which favors this direction.	The UoG welcomes the participation of teachers, especially young ones, at various organized events. There is the Department of Continuous Teacher Training. Each teacher is obliged to attend certain courses.
L3. Faculty / department level			
Criterion 1. *The role of the faculty in the communication with stakeholders with regard to student-centered teaching and learning*	The faculty communicates more widely with students and teachers who have classes at that faculty. There is the right to refuse certain professors who do not meet certain requirements imposed or are unapproved by the students. Chairs have a greater involvement in student-centered teaching, imposing certain standards on its members.	Faculties and chairs / departments are part of the internal organization of the university, where meetings are organized to share examples of good practice and performance in student-centered teaching and learning.	Both the faculty and the department, through its members, are involved in student-centered teaching and learning.
L4. Level of the Council of Studies			
Criterion 1. *Structure of the body responsible for studies*	The body responsible for organizing studies in the SUC is the the Department (section) of the Quality Management in Education, the Department of Career	The Study Board manages one or more study programmes and is instituted and abolished by the Dean of the faculty after consultation with the	There is a body responsible for organizing studies at the faculty level.

Criteria, properties, indicators	SUC	AAU	UoG
	Guidance and Career Consultation; Department of Planning, Evidence and Documentation of the Study Process; Continuing Training Center. All three departments are subordinated to the Vice-Rector on didactic activity, quality and professional training partnerships.	members of the departments responsible for these programmes. Each Study Board must include an equal number of teachers and students' representatives elected by academic staff and students respectively.	
Criterion 2. *Analysis of the evaluation practice*	The assessment has a continuous character and includes the current assessment (during the practical classes), the evaluation through test (2 times per semester), the final evaluation (at the end of the course, during the session). Examination is done in writing, orally or computer-aided. There can be test with variants for the answer, case scenarios, tests etc.	The University uses various evaluation methods, peer evaluation, monitoring of the evaluation, inclusion of an external evaluator.	The evaluation methods, very diversified, depending on the course, teacher, are stipulated in the discipline curriculum. There are regulations that students know before starting the course and know exactly how the assessment will be done, what is the share of each type of evaluation. The evaluation has a continuous character.
Criterion 3. *The way to develop a new study programme*	For Cycle I, Bachelor's degree studies, it is very complicated. At the chair / department level, a working team is formed, who develops the educational plan, arguing the need to initiate such a study programme. Internally, it must be approved at the meeting of the faculty, faculty council, and Senate. If this study programme exists in the nomenclature of specialties, than it is necessary to obtain	The initiative to initiate a new study programme in Cycles I and II comes, as a rule, from a teaching staff, group of teachers forming the programme team or from a research group. At the faculty there is an experienced legal adviser in the field of education who helps the team to develop the document package. The Dean signs this package after rigorous legal scrutiny. The study programme is approved by the Dean, then subjected to	The initiator of a new Bachelor's degree study programme in the UoG is the Department, where a programme committee is formed, which argues, and then elaborates the curriculum of the study programme. The study programme is discussed within the Department, then by the Faculty's Academic Committee. A special role is assigned to professional associations. The requirements for design, development and

Criteria, properties, indicators	SUC	AAU	UoG
	provisional authorization from ANACIP. If this study programme is absolutely new, it is necessary to enter this programme into the Nomenclature of Specialties. This is done by Government Decision.	evaluation at the academic board level.	monitoring of study programmes are described in the Quality Code.
Criterion 4. *Involvement of students in the development of study programmes*	Students are not involved directly in developing the study programme. However, indirectly, they are involved by including representatives in the Faculty Council, in the SUC's Senate where these documents are discussed and voted, where they can express their views. Also, students are questioned with regard to the course or on the whole study process.	Students are 50% involved in study boards, but also in other bodies. The role of the students is double: they directly participate in and influence the evaluation of teachers and study programmes and also have the possibility to influence the evaluation by participating in the study board.	Students are involved in the evaluation of teachers, study programmes and courses.
Criterion 5. *Periodic monitoring and analysis of study programmes*	From the regulatory point of view, the revision is carried out every 5 years. Annually, the feedback from students, graduates, employers is obtained, which allows for an analysis and, if necessary, to initiate the review procedure.	The review of the study programmes is done every semester, 8 annual meetings are organized for this purpose.	They are analyzed annually, including through feedback from students, employers.
L5. Integration of disadvantaged groups of students			
Criterion 1. *The existence of a body dealing with students with disabilities*	The University does not have a center / office specifically dedicated to disabled students, which is why there are no specific responsibilities for	We did not notice the existence of this body at Aalborg University.	At the UoG there is the Help Zone office in every campus.

Criteria, properties, indicators	SUC	AAU	UoG
	teaching staff and management staff, and there is no allocation of resources in that direction. However, within certain limits the institution focuses on the positive solution of the respective problems by creating access to the institution (*special ramps*), the appointment of persons as *"Supervisors on specialties*", who have the task of guiding, helping students of the targeted specialties.		
Criterion 2. *Ways of working with disadvantaged students in relation to teaching*	Important steps are being taken to create minimum conditions so that they are not marginalized. Counseling is done by the group supervisor.	All conditions are created so that they are not marginalized.	They work very hard with them through the HelpZone office. The range of services they can benefit from is very broad, including issues related to teaching, learning, assessment.
L6. Infrastructure (Physical environment)			
Criterion 1. *Ensuring facilities tailored to the needs of people with disabilities*	SUM makes efforts and takes measures to adapt the infrastructure so as to ensure the access to education for students with disabilities. Each block of study has access ramp for people with locomotory problems.	There is an infrastructure that provides access to studies and offers learning opportunities to students with disabilities, including the visually impaired ones.	The infrastructure provides access to studies and offers learning opportunities for students with disabilities
Criterion 2. *Existing facilities for students to support problem-based learning*	SUC has a modernized infrastructure, with lecture halls, campuses, scientific library, WI-FI connection, etc.	The University has a very good infrastructure, with well-equipped study halls, campuses, libraries, WI-FI connection, and so on.	There is a very good infrastructure at the university, with well-equipped study halls,

Criteria, properties, indicators	SUC	AAU	UoG
			campuses, libraries, WI-FI connection etc.
L7. Study programme level (Business and Administration)			
Criterion 1. *Structure of the Business and Administration study programme*	The duration of the studies is 3 years, 6 semesters respectively	The duration of the studies is 3 years, 6 semesters respectively	The duration of the studies is 3 years, 6 semesters respectively
Criterion 2. *Student's workload*	The workload is calculated in transferable credits*:* for one academic semester - 30 ECTS; for one academic year - 60 ECTS. 1 ECTS equals 30 hours of work per student.	In Denmark, each year of study is equivalent to 60 ECTS, respectively each semester, 30 ECTS. 1 ECTS equals 27 hours of work per student.	In the United Kingdom, the workload for one year is 120 CAT. 1 ECTS equals 2 CAT, 1 CAT is equivalent to 10 hours of student work
Criterion 3. *Student assessment*	- There is a Regulation on assessment of the student learning activity, explaining the types of evaluations performed at SUC, the arrangements for organizing and conducting the exams, the evaluation scale - The assessment is based on certain competencies acquired by the student. During the semester, two sessions of the current assessment (tests) are organized, proportionally distributed during the semester, in which the intermediate status of the student's progress is determined. The share of the current grade is 60%, the share of the exam	- Each curriculum contains information about the types of examinations, how they are performed, the requirements for the answers students have to give. - There are Regulations that explain in detail every possible situation. - The assessment is based on certain skills that students must demonstrate. În Universitatea din Aalborg utilizarea pe scară largă a proiectelor în echipă aduc un specific și evaluărilor. At Aalborg University, the use at a large-scale of team projects brings out the specifics to the assessments.	- Each curriculum contains information about the types of examinations, how they are performed, the requirements for the answers students have to give. - There are Regulations that explain in detail every possible situation. - The assessment is based on certain skills that students must demonstrate. The UoG publishes separate principles and procedures for assessing students with disabilities.

Criteria, properties, indicators	SUC	AAU	UoG
	grade is 40% of the final grade.		
Criterion 4. *Involvement of teaching staff, students, graduates, employers in the design, management and improvement of the study programme*	Typically, only teachers are directly involved in designing a study programme. However, before putting certain courses on paper, students, employers, graduates are consulted either through different questionnaires, ororganizing different round tables, etc. So, more parties are indirectly involved in the development and improvement of the study programme.	Several actors are involved in the elaboration, development and improvement of a study programme: teaching staff, students, employers, graduates, both directly (through participation in different committees) and indirectly (through responses to questionnaires, other feedback).	Several actors are involved in the elaboration, development and improvement of a study programme: teaching staff, students, employers, graduates.
Criterion 5. *Avoiding and punishing cheating and plagiarism*	At the institutional level, there is the Code of Ethics of the University, the Regulation on plagiarism prevention among students / master degree students, which clarifies what the plagiarism is, what are its consequences.	At Aalborg University there is a special VBN portal that tests all the projects, the bachelor's and master's degree theses against plagiarism.	Gloucestershire University has been using the Turnitin plagiarism detection software since autumn 2015
Criterion 6. *Student appeals*	The grade awarded by the examiner may be disputed on a regulatoru basis. Students can challenge the results of the final examination within 24 hours of the notice of the grade.	There are Institutional Regulations stipulating the conditions when appeals can be submitted, how to resolve them.	There are Regulations that stipulate in great detail the conditions when appeals can be submitted, how to resolve them.
Criterion 7. *The current grading system*	Assessment of knowledge is appreciated with grades from 10 to 1. Grades from "5" to "10", obtained as a result of the evaluation,	In Denmark, a grading system based on 7 scales, consisting of five positive grades 0, 2, 4, 7, 10, 12 and	In the UK, the grading system is expressed in percentage and in letters. Thus, 70-100% equals to A, 60-69% - B; 50-59% -

Criteria, properties, indicators	SUC	AAU	UoG
	allow obtaining the credits allocated to them according to the educational plan. The final grade results from the average sum of the grades from the current valuations and the final examination and is accurately entered with a semicolon.	two negative grades 00 and -3, is used.	C; 40-49% - D. These are the promotion grades. Those below 40% are not promotion grades.
Criterion 8. *Role of the external examiner*	External examiners are required in the case of the completion exam of the higher education. They are appointed as Chairmen of the Bachelor's degree Examination Committees by order of the Minister of Education, on the basis of SUC's proposals. For current exams no external examiners are required.	The external examiner is required to be present in the student assessment activity for greater objectivity of their assessment.	In UoG, the "Externality" phenomenon is practiced - an external teacher (another university) is assigned to each course to evaluate the assessment method and the results provided by the student's internal teacher. Also in this process, the external teacher will give his colleague suggestions for improvement.
Criterion 9. *Employability of graduates*	In SUC, the Bachelor's degree theses is developed on the basis of the enterprises where the students have performed their internships.	At Aalborg University projects are developed based on real companies, with real problems.	In the UoG, the one-year internship is welcomed and stimulated, with the interruption of the study process. Several initiatives are developed, which aim to contribute to a better employment of graduates.

5.3 EMERGING PATTERNS

Table 7. Data reduction table

	Common patterns	Peculiarities
L1: System level		
Criterion 1. *Acreditation of study programmes*	Accreditation of study programmes is required. There are methodologies, procedures, well-defined evaluation indicators.	Different names of the bodies responsible. The methodologies used and the indicator system largely reflect the specificity of the country and the higher education system concerned.
Criterion 2. *National quality assurance system*	1. There are national bodies to monitor and, implicitly, ensure and improve the quality of university studies. 2. Quality assurance is part of the accreditation process of teaching and research, in order to substantiate research resources. 3. One of the criteria imposed by the Ministry is the continuous assurance of the internal quality of the study programme.	In Denmark and the Republic of Moldova accreditation agencies are also in charge of quality assurance issues. In the UK, the Independent Quality Assurance Body is the Quality Assurance Agency in Higher Education (QAA).
Criterion 3. *Professional bodies involved in accreditation*	There is no obligation in any of the universities to involve professional bodies in the accreditation of study programmes. At the same time, employers are indirectly involved in quality evaluation.	In Denmark, within the university there are advisory bodies at the level of each Study Board, composed of competent and notorious external persons..
L2. University management level		
Criterion 1. *University governance, management and organization bodies*	There is a Governance and Management system	*Denmark:* The university Board and the Rector. It is a unitary management structure. *United Kingdom:* Governing Bodies: Council, Vice-Rector, Academic Committee, Secretary, Student Organizations.

	Common patterns	Peculiarities
		Republic of Moldova: Senate, the Council for Institutional and Strategic Development, the Scientific Council, the Faculty Council, the Administration Council, and the Rector
Criterion 2. *Institutional strategy of the university, incorporating the curriculum strategy with a focus on student-centered learning*	In all universities there are institutional strategies. In all institutional strategies emphasis is placed on student-centered learning.	In *Aalborg University* there is an institutional commitment to learning and innovative teaching that is laid down in the 2016-2021 university strategy, focusing in particular on problem-based learning and student employability. The *UoG's Strategic Plan* (2012-2017) provides for the development of student-centered education. In the AESM Charter, Chapter VII "Promoting student-centered education" is dedicated to this topic. In *the SUC Charter*; Institutional Development Strategy for 2012-2016.
Criterion 3. *Quality assurance bodies at university level*	In each university there are bodies established to ensure a high level of teaching and research activity.	*At Aalborg University* there is a Group responsible for quality assurance and development. *In the UoG*, supervision of all quality assurance procedures is within the competence of the Academic Council. *At USC*, at the Senate level, the Quality Commission and the Department (Division) are involved for quality management in education, guidance and career consultation were established.

	Common patterns	Peculiarities
Criterion 4. *Pedagogical training of teaching staff and their continuous training*	There are requirements at each university level to prove formal pedagogical training. There is a need, but also lifelong learning conditions.	*At Aalborg University* of a Learning Lab is created, the PBL Academy; *At UoG* there is the Continuous Training Department; At *SUC there is the Continuing Training Center.*
L3. Faculty / department level		
Criterion 1. *The role of the faculty in the communication with stakeholders with regard to student-centered teaching and learning*	Faculties and chairs / departments are part of the internal organization of the university, where meetings are organized to share examples of good practice and performance in student-centered teaching and learning.	
L4. Level of the Council of Studies		
Criterion 1. *Structure of the body responsible for studies*	There is a Council of Studies in each of the universities, but the role of this body is different. Different is also the level at which it is established.	*In Aalborg*, the Study Board manages one or more study programmes and is instituted and abolished by the Dean of the faculty. *In the UoG* there is a body responsible for organizing studies at the faculty level. *In SUC* there is the Department of planning, tracking and documentation of the educational process
Criterion 2. *Analysis of the evaluation practice*	Each university has a rich experience in using different ways of evaluating students.	
Criterion 3. *The way to develop a new study programme*	There are clear provisions for how to develop a new study programme.	The initiative to develop a new study programme at Aalborg University can come from a teacher, while in the UoG and SUC, the initiator can be the department (the chair).

	Common patterns	Peculiarities
Criterion 4. *Involvement of students in the development of study programmes*	In all universities, students are directly or indirectly involved in developing the study programme.	There are clear provisions in Aalborg University regarding the participation of students in the Study Board, responsible for the development of the study programme. In SUC and UoG, students' involvement is indirect through their participation in the bodies that then analyze and approve these plans, but also through various questionnaires the students take part in.
Criterion 5. *Periodic monitoring and analysis of study programmes*	It is the focus of attention in all the universities studied.	At Aalborg University they are analyzed every semester, in SUC and UoG - annually.
L5. Integration of disadvantaged groups of students		
Criterion 1. *The existence of a body dealing with students with disabilities*		There is a specialized body – HelpZone - in the UoG. In SUC and Aalborg University at the institutional level and at the faculty level their record is kept to determine the individual support and assistance measures that can be offered.
Criterion 2. *Ways of working with disadvantaged students in relation to teaching*	All conditions are created so that they are not marginalized.	The HelpZone office in the UoG also provides assistance to disadvantaged people with regard to teaching-learning-evaluation. In SUC, counseling is provided by group supervisors.
L6. Infrastructure (Physical environment)		
Criterion 1. *Ensuring facilities tailored to the needs of people with disabilities*	Universities have infrastructure that provides access to studies and offers learning opportunities for students with disabilities	

	Common patterns	Peculiarities
Criterion 2. *Existing facilities for students to support problem-based learning*	Universities are well equipped with study halls, computers, well-arranged campuses, libraries, WI-FI connection, and so on.	
L7. Study programme level (Business and Administration)		
Criterion 1. *Structure of the Business and Administration study programme*	All the study programmes analyzed assume a period of studies of 3 years, 6 semesters.	In UoG, it is possible (welcomed) to interrupt studies over a year in favor of the internship. The internship period as a compulsory component of the study programme exists at SUC.
Criterion 2.*Student's workload*	The workload of the student is measured in transferable study credits and consists of work with the teacher in the auditorium (direct contact) and individual work of the student.	In Aalborg University and SUC, the workload is measured in ECTS (30 per semester and 60 per year respectively), and in UoG in CAT (60 per semester and 120 per year). 1 ECTS in Denmark = 27 student working hours 1 ECTS in the Republic of Moldova = 30 hours 1 CAT = 10 hours
Criterion 3. *Student assessment*	Universities use a wide range of examinations. Continuous examination is practiced throughout the semester. Typically, the study programme indicates the evaluation methods.	In Aalborg University, a specificity of the examination is determined by the large share of team work. Different examinations for people with disabilities are conducted in the UoG. In SUC there is a calculation formula for determining the final grade for the discipline.

	Common patterns	Peculiarities
Criterion 4. *Involvement of teaching staff, students, graduates, employers in the design, management and improvement of the study programme*	In all universities, different actors, students, teachers, employers, graduates, participate in the elaboration and improvement of the study programmes.	In the AAU, teachers and students participate in an equal number in drafting the study programme. In the other universities, the actors involved, to a large extent participate indirectly in the design, management and improvement of the study programme.
Criterion 5. *Avoiding and punishing cheating and plagiarism*	In all universities, plagiarism and cheating are not tolerated. Different ways of preventing and fighting this scourge are used.	At *Aalborg University* there is a special VBN portal that tests all the projects, the bachelor's and master's degree theses against plagiarism. *Gloucestershire University* has been using the Turnitin plagiarism detection software since autumn 2015. At *SUC*, the BA theses are not verified by the anti-plagiarism system, only master theses.
Criterion 6. *Student appeals*	Students have the right to challenge evaluation grades. There are elaborated Regulations, which in detail explain how, when, under what conditions, the grades can be challenged.	
Criterion 7. *The current grading system*	There is a transparent grading system in each university, which allows to know in advance what is the appreciation granted for and for which level of knowledge.	In Denmark, a grading system based on 7 scales, consisting of five positive grades 0, 2, 4, 7, 10, 12 and two negative grades 00 and -3, is used. In the UK, the grading system is expressed in percentage and in letters. Thus, 70-100% equals to A, 60-69% - B; 50-59% - C; 40-49% - D. These are the promotion grades. Those below 40% are not promotion grades.

	Common patterns	Peculiarities
		Assessment of knowledge in the Republic of Moldova is appreciated with grades from 10 to 1. Grades from ”5” to ”10”, obtained as a result of the evaluation, allow obtaining the credits allocated to them according to the educational plan.
Criterion 8. *Role of the external examiner*	The external examiner has the same role in assessing the students in the analyzed universities, only that it manifests itself differently.	In the AAU and UoG for every current exam, people from outside are invited to allow more objective evaluation of student learning outcomes. In SUC, the external examiner is only present at the completion of the studies.
Criterion 9. *Employability of graduates*	Study programmes are committed to employability.	

6. PILOTING THE „BUSINESS ADMINISTRATION" BACHELOR'S DEGEE PROGRAMME WITH STUDY COMPONENTS IN ENTREPRENEURSHIP

6.1 INTRODUCTION

When developing the educational plan for the bachelor's degree study programme „Business Administration" with study components in Entrepreneurship, the provisions of the Framework Plan and National Qualifications Framework for domain 36, specialty 363.1 Business and Administration, were taken into account.

The graduate obtains the title of Bachelor of Economic Sciences for full accomplishment of the educational plan, the promotion of the evaluation tests, including the bachelor's examination, according to the grading system in the Republic of Moldova ranging from 1 to 10 points, the promotion grades being 5 to 10, and the accumulation of 180 transferable credits under the European Credit Transfer System (ECTS). The study programme was based on the objectives and requirements of the National Qualifications Framework according to the general field of study: 36. Economic Sciences; field of professional training: 363. Business and Administration; specialty: 363.1. Business and Administration.

The set of teaching methods and procedures used in the training process will contain both the traditional methods (lectures and seminars), modified and completed according to the proposed objectives, as well as the modern, interactive methods oriented towards the cultivation of interest, motivation, activism, social collaboration, organization spirit , initiative, inventiveness and creativity.

In the study process the focus will be on active-participative (interactive) methods, which increase the intellectual potential of beneficiaries by engaging in a personal effort in the process of learning and training of students for an active and creative professional life. Flexible and diversified forms of organization specific to the nature of content and work with adults will be used that provide formative, operational, action-oriented, developmental learning focused on the formation of operational capabilities, psychological processes, skills, attitudes, beliefs, values, ideals and aspirations, changes in mentalities (lectures, seminars, computer-aided training, laboratories and workshops, etc.). Methods and procedures such as case study, role play, heuristic conversation, debates, brainstorming, problem-solving, investigation, project, multiple-angle exploration, panel discussion, argumentation and counter argumentation, independent academic learning, etc. will be specifically combined for different situations.

The personal support of each student will be provided by the tutorial system.

The evaluation will focus on the effectiveness of educational activities in terms of the relationship between the projected objectives and the results obtained by the students in the learning process. It will be done by the teachers and will focus not only on knowledge but also on skills, abilities and attitudes.

The evaluation will have a complex pedagogical function:

a) from the perspective of the assessed one – of stimulating, strengthening the results, building skills, raising awareness of one's own possibilities, positive professional orientation;
b) from the perspective of the assessor - of assessing the efficiency of his/her activities and of the changes necessary for the full achievement of the objectives.

6.2 PROGRAMME OUTCOMES

The National Qualifications Framework has the following objectives:

1. Demonstrate functional knowledge in the following areas:
    1.1. Economic theory - genesis, essence, methodology and method, economic laws
    1.2. Management - the evolution of management science, the main contents, managerial processes and functions
    1.3. Marketing - development and realization of the company's marketing policy
    1.4. Markets - the study, operation and development of resource, goods and services markets
    1.5. Customers - factors of influence, purchasing and consumption processes, consumption patterns
    1.6. Law - knowledge of legislation on entrepreneurship and business, small business, consumer protection, advertising in the Republic of Moldova
    1.7. Finance - finance management, use of accounting and other financial systems
    1.8. Information systems - development and exploitation of information systems with impact on the achievement of managerial functions in the organization.
2. Start a business
3. Know how to identify business ideas and evaluate opportunities
4. Possess methods to assess and minimize business risks
5. Ensure that activities are carried out in accordance with established laws and regulations
6. Adjust the organization's work to the requirements of the environment
7. Take optimal decisions under conditions of certainty, uncertainty, risk
8. Develop the organizational structure of the organization
9. Evaluate and improve the efficiency and effectiveness of the organization's activities
10. Self-motivate and increase the efficiency of his/her own activity
11. Form teams and develop collaboration
12. Motivate and create productive labor relations
13. Apply quality management systems
14. Communicate convincingly and effectively
15. Ensure and manage the efficient use of material, financial and informational resources
16. Organize the business and administration research process
17. Draw up an applicative paper dealing with solving a problem in the field of business administration
18. Develop and coordinate project implementation
19. Know the competence and involvement area of managers at different hierarchical levels

20. Develop judgments based on the knowledge of the social and ethical issues that arise in work or study.

6.3 DESCRIPTION OF THE PROGRAMME (ANNEX 1)

7. ROADMAP

7.1 INTRODUCTION

The Roadmap is a consolidated list of measures, commitments and timelines for implementing actions to overcome the challenges identified in the pilot study programme for the implementation of Problem-Based Learning.

Its immediate purpose is to establish an institutional foundation to overcome certain barriers or certain threats to the implementation of the project in question.

As far as the implementation period is concerned, it must be taken into account that some new elements that will be implemented can be included in the existing regulatory framework, while others require some changes in the existing regulatory acts.

7.2 FIT-FOR-PURPOSE

In order to implement the pilot study programme, mentioned in Chapter VI, a Roadmap was developed. This includes several necessary activities to be implemented at the institutional level in order to successfully implement the pilot study programme. The implementation of this Action Plan has already begun, with some activities being carried out, others having to be launched. We could formally divide these activities into several groups:

I. Activities related to the *training of the teaching staff* with regard to the use of the PBL method. In this respect, some of the teachers who will have classes in the respective group, which is going to be enrolled and established this year, have participated and will participate in several trainings organized under the project at TUM or at SUC during 2016-2017. Also, several teachers have benefited from academic mobility at partner Universities in the European Union, where they were able to get acquainted with the method in question. Multiple trainings for teachers on problem-based learning, the use of equipment in the teaching and assessment of students, and the development of on-line courses, etc. will be organized within SUC.

II. Activities related to the *elaboration* of the educational plan for the students who will study within the pilot study programme. When elaborating the plan, it was taken into account the experience seen and studied in the partner Universities of the European Union, the legislative and normative acts regulating the activity in higher education in the Republic of Moldova. Also, some proposals have been made to amend some of the provisions of the normative acts in force, in order to be able to carry out the activity within the pilot study programme under the regulatory conditions.

III. *Preparing the physical environment* for organizing studies. In this regard, the SUC is equipped with everything necessary, including study halls, literature, access to databases, etc. Also, from the sources of the project with SUC co-financing, two student study rooms were prepared for the team work of the students, WI-FI was installed free of charge, and 4 other study halls were equipped with interactive whiteboard. The SUC

library has been completed with books purchased under this project with reference to problem-based learning that everyone can read.

IV. Another group of activities refers to the *organization of the Admission 2017*. In this sense, information leaflets on the pilot study programme will be prepared, which will be sent to high school graduates. The information will also be made public on the SUC website, will be published in the university promotion newspaper, but also in other local and regional newspapers.

V. *Elaboration of educational documents:* curricula on disciplines (analytical programmes / syllabi), guidelines, case studies, evaluation etc. (for the first year of study).

VI. Activities related to *the dissemination of good practice.* In this regard, the SUC website, on which we will publish regularly information on the implementation of this project (this is already done) will be used, the members of the project team will participate with communications at various conferences, workshops, will produce scientific articles to be published in scientific journals in the country.

VII. *Extending the project* to other specialties within SUC, especially at the Faculty of Economics, Engineering and Applied Sciences.

All of these activities will require some resources. The necessary financial resources will be covered by the project (mobility of teaching staff and students, procurement of equipment, etc.), with the support of SUC (organization of trainings with teachers, motivating them, refurbishment works, procurement of equipment, etc.).

Table 8. Roadmap for the implementation of the Business and Administration pilot study-programme

	Implementation actions	Responsible person	Implementation deadline	Resources
1.	Assessment of the necessity and opportunity of elaboration / modification of the study programme and initiation of the elaboration process.	Popa A.	December 2015	FR: within the approved budget limits HR: head of the EMAS Chair / Department, academic staff
2.	Setting up the Working Group and designating the person responsible for drafting / modifying the study programme	Popa A.	December 2016	HR: Academic staff
3.	Analysis of similar national and international programmes (including visited universities / EU partners in the project)	Popa A. Roșca-Sadurschi L. Todos I. Girneț S.	January – March 2017	FR: within the approved budget limits HR: Academic staff
4.	Assessing the expectations of the economic and social sector regarding the content of the study programme and the provisions of the new teaching and evaluation methods	Roșca-Sadurschi L.	January – March 2017	Real sector partners
5.	Developing the study programme. Discussing it at the faculty council	Roșca-Sadurschi L.	March – April 2017	HR: Academic staff
6.	Training of the teaching staff for working within the pilot study programme: - Mobility to AAU - Mobility to UOG - Training seminars at SUC - Seminar at TUM		October –November 2016 February-March 2017 April-June 2017 June 2017	FR: within the approved budget limits HR: Academic Staff, Partner universities
7.	Adjustment and approval of the modified plan at the meeting of FEISA faculty council and the SUC Senate	Roșca-Sadurschi L.	April – May 2017	HR: Academic staff

	Implementation actions	Responsible person	Implementation deadline	Resources
8.	Extending the Pilot Programme to other programmes (approval of changes in the educational plans, approval by the council, senate)	Popa A. Roșca-Sadurschi L.	May – June 2017	HR: dean, head of department, academic staff
9.	Adjustment of academic curricula to PBL requirements	Roșca-Sadurschi L. The teachers involved	June – August 2017	HR: heads of departments, academic staff
10.	Preparation of two study rooms for team work. Installation of the equipment.	Popa A. Danilceac O.	March - June 2017	FR: within the approved budget limits HR: Vice-rector for educational activity, social and administrative-household relations, Technical Service
11.	Campaign to promote the study programme: - production of advertising leaflets; - visits to high schools, - SUC website - newspaper „Îndrumarul abiturientului” - local and regional newspapers	The person responsible for the study programme , Danilceac O.	March – June 2017	FR: within the approved budget limits HR: academic staff, vice-rector for educational activity, social and administrative-household relations
12.	Organization of admission.	Popa A. Admission committee	June – August 2017	HR: Vice-rector for educational activity, social and administrative-household relations, admission committee
13.	Developing professional training approaches according to the PBL educational strategy (application of didactic methods: problem-solving, case study, project, group work, etc.)	The teachers involved	June - August 2017	FR: within the approved budget limits HR: heads of departments, academic staff

	Implementation actions	Responsible person	Implementation deadline	Resources
14.	Initiating the pilot study programme	Popa A. Roșca – Sadurschi L.	September 1, 2017	HR: heads of departments, academic staff
15.	Deployment of the study programme	The person responsible for the study programme The teachers involved	September 2017 - June 2020	FR: within the approved budget limits HR: Academic staff
16.	Elaboration of educational documents: curricula on subjects (analytical programmes), guidelines, case studies, evaluation etc. (for the years II and III of studies)	The person responsible for the study programme The teachers involved	September 2017 - June 2018	HR: Academic staff
17.	Developing the necessary documents for the selection of students for mobility	The person responsible for the study programme	October – November 2018	HR: Dean, External Relations Service
18.	Student selection for mobility	The person responsible for the study programme	February - March 2018	HR: Dean, External Relations Service
19.	Student mobility	Popa A. Bîrlea S. The person responsible for the study programme	Septembrie – December 2018	FR: within the approved budget limits HR: Dean's Office, academic staff, students
20.	Monitoring and improvement of the pilot study programme: undertaking corrective and preventive actions	Popa A. Bîrlea S. Todos I. The person responsible for the study programme	During the study year 2017-2018	HR: Dean's Office, academic staff, students

7.3. CHANGING THE CONTENT

The Roadmap presented above includes some activities required for implementation of problem-based learning within the Entrepreneurship and Business Administration (Business and Administration) pilot study programme. In fact, we can not include all the necessary changes in this action plan. As mentioned above, we started from the idea that we must maximally fall within the existing regulatory framework, which means that starting with September 1, 2017, we could start implementing this programme. At the same time, certain changes have been made, which can not be within the existing normative limits and which would require a favorable opinion from the Ministry of Education of the Republic of Moldova. In the table below, we highlight these moments:

Regulatory provisions required to be amended

Article	Provision	Proposals
Framework Plan for Higher Education, art. 9.	In **Cycles I and II**, the course unit / discipline can be accomplished through **classroom activity** (direct contact): lectures, seminars, laboratory works, practical works, design works, didactic, clinical internships and other forms approved by the Senate; as well as **non-classroom didactic activity**: didactic-artistic or sports activities; *annual, bachelor, master's degree projects / theses*; individual activities, social and community activities, other activities provided by institutional regulations.	To assign to the class didactic activity the supervision of the team activity of the students
Regulation on the organization of studies based on NSSC, art. 20	For the study programmes of 180 credits, an annual thesis shall be developed in the second year of study. For study programmes of 240 credits, an annual thesis shall be developed in the second and third year of studies.	To exclude the limitation to a single project

At the same time, the changes mentioned in the educational plan existing in the „Business and Administration" specialty also require the adaptation of the theoretical and practical courses to the new requirements. It is necessary to prepare case studies, to prepare some didactic materials, which would allow a better understanding of the essence of PBL use, the role of the teacher, the role of the student, which involves teamwork, the division of responsibilities, how the evaluation takes place, etc. It is necessary to train the teachers and ensure their continuous improvement in the field of PBL use and to prepare methodological resources.

8. CONCLUDING REMARKS

Improving higher education can be achieved both through structural changes in education and through the implementation of teaching and learning methods. The choice, from the variety of educational methods, of those considered most effective for a particular teaching activity, is exclusively the result of the teacher's decision. In making this decision, the didactic staff takes into account the following considerations: the pedagogical objectives pursued; the specifics of the learning content; students' particularities; the available time; his / her own pedagogical and methodical skills. As an example, „Problem Based Learning" (PBL) is the most appropriate one, changing the classical approach of higher education, by changing the role of the teacher, the attractiveness of problem-based studies, and by assigning students an important role in identifying and solving problems.

PBL is a student-centered training model based on research where the student engages with a genuine, poorly structured problem requiring more in-depth research [56]. Students identify the shortcomings in their knowledge, carry out research, and apply what they have learned to develop solutions and present their findings [57].

The PBL model is based on *new perspectives in learning:*

1. Knowledge from research (analytical knowledge)
2. Knowledge based on experience (knowledge based on practice)

It is important to ensure the synergy between these two.

3. Creativity: Can be learned
4. The ability to learn increases with the level of knowledge (absorption capacity theory)

In the literature we consulted in the PBL field, we noticed an important risk for using PBL: despite the potential benefits of PBL, many teachers lack confidence or knowledge to use it. Student-centered learning, such as PBL, contributes substantially to increasing student competitiveness and employability. It also contributes to the dissemination of research results, which enables academic staff to engage in research-based teaching, providing students with the latest scientific and business developments.[58]

Key success factors of the project, but also of the PBL method are:

- Allow students to take the lead and take responsibility for their own studies;
- Create a symmetrical power relationship between students and teachers;
- Promote competitiveness and possibility of increased employability of students;
- Integrate and support socially disadvantaged students.

[56] Jonassen, D. H., & Hung, W. (2008). All problems are not equal: Implications for problem-based learning. *Interdisciplinary Journal of Problem-Based Learning*, 2(2), 4.
[57] Barrows, H.S. (1996). Problem-based learning in medicine and beyond: A brief overview. In L. Wilkerson, & W. H. Gijselaers (Eds.), *New directions for teaching and learning*, No.68 (pp. 3-11). San Francisco: Jossey-Bass.
[58] http://www.pblmd.aau.dk/about-pblmd/

Annex 1

Year of study I, Semester I

Code	The name of the course unit / module	Total hours			Number of hours by type of activity			Form of assessment	Nr. of credits
		Total	Direct contact	Individual study	C	S	L/P		
G.01.O.001	Foreign language I	60	30	30	-	10	20	E	2
G.01.O.002	Information communication technologies	60	30	30	10	-	20	E	2
G.01.O.049	Principles of study through the method „Learning through Problem Research" (*PBL – Problem Based Learning*)	60	30	30	10		20	E	2
F.01.O.003	Economic theory I (microeconomics)*	180	90	90	45	45	-	E	6
F.01.O.004	Economic mathematics	180	60	120	30	30	-	E	6
F.01.O.050 S.01.O.005	*Module: Economic Informatics and Business Communication:* Economic informatics Correspondence and business communication	*180* 90 90	*60* 30 30	*120* 60 60	*30* 15 15	*15* 15	*15* 15 	E	6
F.01.O.006	The basics of management *	180	60	120	30	30	-	E	6
	Total hours with the assigning of study credits	900	360	540	155	130	75	6E	30
G.01.O.007	Physical education	30	30	-	-	-	30	adm	-
TOTAL HOURS PER SEMESTER I		**930**	**390**	**540**	**155**	**130**	**105**	**6 E**	**30**

* A joint mini-project will be developed for both disciplines (for each semester in part). Mini-project - group work (3-5 students) of the research problem related to a group of related course units. Passing the examination and awarding study credits is conditional on the MANDATORY defence of the Mini - Research Project.

** A joint mini-project will be developed for both disciplines. Mini-project - group work (3-5 students) of the research problem related to a group of related course units. Passing the examination and awarding study credits is conditional on the MANDATORY defence of the Mini - Research Project.

Year of study I, Semester II

Code	The name of the course unit / module	Total hours			Number of hours by type of activity			Form of assessment	Nr. of credits
		Total	Direct contact	Individual study	C	S	L/P		
G.02.O.008	Foreign language II	60	30	30	-	10	20	E	2
G.02.O.009	Ethics and professional culture	120	60	60	30	30	-	E	4
F.02.O.010	Economic theory II (macroeconomics)*	180	90	90	45	45	-	E	6
F.02.O.011	The basics of entrepreneurship*	180	90	90	45	45	-	E	6
F.02.O.012	Economic statistics**	180	60	120	30	30	-	E	6
F.02.O.013	Basics of accounting**	180	60	120	30	30	-	E	6
TOTAL HOURS PER SEMESTER II		**900**	**390**	**510**	**180**	**190**	**20**	**6E**	**30**

* A joint mini-project will be developed for both disciplines (for each semester in part). Mini-project - group work (3-5 students) of the research problem related to a group of related course units. Passing the examination and awarding study credits is conditional on the MANDATORY defence of the Mini - Research Project.

** A joint mini-project will be developed for both disciplines. Mini-project - group work (3-5 students) of the research problem related to a group of related course units. Passing the examination and awarding study credits is conditional on the MANDATORY defence of the Mini - Research Project.

Year of study II, Semester III

Code	The name of the course unit / module	Total hours			Number of hours by type of activity			Form of assessment	Nr. of credits
		Total	Direct contact	Individual study	C	S	L/P		
G.03.O.014	Foreign language III	60	30	30	-	10	20	E	2
U.03.A.015 U.03.A.016	Economic doctrines Philosophy and logic of economic and engineering activity	120	60	60	30	30	-	E	4
S.03.A.017 S.03.A.018	Production management* Technology and merceology	180	90	90	45	45	-	E	6
F.03.O.019	Management methods and techniques*	180	90	90	45	45	-	E	6
S.03.A.020 S.03.A.021	Company finances * Finances	180	60	120	30	30	-	E	6
S.03.A.022 S.03.A.023	Business law* International commercial law	180	60	120	30	30	-	E	6
TOTAL HOURS PER SEMESTER III		**900**	**390**	**510**	**180**	**190**	**20**	***6E***	**30**

* An interdisciplinary semestrial project will be developed (for each semester in part). **Project -** Group work of 3-5 students of the research problem related to all course units (Fundamental and / or Specialty) in the semester. Passing the examination and awarding study credits is conditional on the MANDATORY defence of the Project.

Year of study II, Semester IV

Code	The name of the course unit / module	Total hours			Number of hours by type of activity			Form of assessment	Nr. of credits
		Total	Direct contact	Individual study	C	S	L/P		
G.04.O.024	Foreign language IV	60	30	30	-	10	20	E	2
U.04.A.025 U.04.A.026	Leadership Initiation in the human capital economy	120	60	60	30	30	-	E	4
*G.04.O.027	Communication techniques (for alolingve groups)	90	45	45	15	-	30	E	3
*U.04.A.028 *U.04.A.029	Oratory art (except for alolingve groups) Communication techniques (except for alolingve groups)								
S.04.A.051 S.04.A.030 S.04.A.031	Entrepreneurial project management* Planning systems Business planning	180	90	90	45	45	-	E	6
F.04.O.032	Marketing*	180	60	120	30	30	-	E	6
F.04.O.033	Human resources management*	180	60	120	30	30	-	E	6
	Specialtu (initiation) internship*	90		45	1,5 weeks			E	***3***
TOTAL HOURS PER SEMESTER IV		**900**	**345**	**510**	**150**	**145**	**50**	**7E**	**30**

* An interdisciplinary semestrial project will be developed (for each semester in part). **Project** - Group work of 3-5 students of the research problem related to all course units (Fundamental and / or Specialty) in the semester. Passing the examination and awarding study credits is conditional on the MANDATORY defence of the Project.

Year of study III, Semester V

Code	The name of the course unit / module	Total hours			Number of hours by type of activity			Form of assessment	Nr. of credits
		Total	Direct contact	Individual study	C	S	L/P		
U.05.A.034 U.05.A.035	European economic integration Community regional development policies	90	45	45	20	25	-	E	3
U.05.A.036 U.05.A.037	Intellectual property law Legal initiation in copyright and related rights	90	45	45	20	25	-	E	3
S.05.O.038	Economic and financial analysis*	180	90	90	45	45	-	E	6
S.05.O.039	Risk management*	180	90	90	45	45	-	E	6
S.05.A.040 S.05.A.041	Supply management** Sales techniques	180	60	120	30	30	-	E	6
S.05.A.042 S.05.A.043	Quality management** Quality management systems	90	30	60	15	15	-	E	3
S.05.O.044	Entrepreneurial development project***	90	30	60			30	E	**3**
TOTAL HOURS PER SEMESTER V		**900**	**390**	**510**	**175**	**185**	**30**	**7, E**	**30**

* A joint mini-project will be developed for both disciplines.

** A joint mini-project will be developed for both disciplines.

*** A mini-project will be developed. Mini-project - group work (3-5 students) of the research problem related to a group of related course units. Passing the examination and awarding study credits is conditional on the MANDATORY defence of the Mini - Research Project

Year of study III, Semester VI

Code	The name of the course unit / module	Total hours			Number of hours by type of activity			Form of assessment	Nr. of credits
		Total	Direct contact	Individual study	C	S	L/P		
S.06.A.045 S.06.A.046	Comparative management* Management of international trade	90	45	45	22,5	22,5	-	E	3
S.06.A.047 S.06.A.048	Innovative management* Merchandising	90	45	45	22,5	22,5	-	E	3
	Specialty (production) internship*	180	-	180	3 weeks			E	6
	Research (Bachelor's degree) internship	270	-	270	4,5 weeks			E	9
	Bachelor's degree examination	270	-	270	-	-	-	E	9
TOTAL HOURS PER SEMESTER VI		**900**	**90**	**810**	**45**	**45**	**0**	**5 E**	**30**

* A project will be developed. **Project** - Group work of 3-5 students of the research problem related to all course units (Fundamental and / or Specialty) in the semester. Passing the examination and awarding study credits is conditional on the MANDATORY defence of the Project.

Note:

The planned hours (<u>in all semesters</u>) for Seminars, Laboratory works and Individual study will be done using the Problem Based Learning (PBL) method. Students will carry out research projects developed by the group (3-5 persons) under the guidance of the scientific and didactic staff who hold the courses in the Project module.

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Introducing Problem Based Learning in Moldova: Toward Enhancing Students' Competitiveness and Employability

www.pblmd.aau.dk

LAW:

Student-Centered Active-Learning Study Programme

State University of Moldova

Work Package 3

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Chisinau, 2017

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1 INTRODUCTION

THE GOAL

This report is part of the Work Package 3 of the project „Introducing Problem Based Learning in Moldova: Toward Enhancing Students' Competitiveness and Employability", funded under the European Erasmus+ programme.

The project aims at improving the quality of study programmes and teaching and learning methodologies in the higher education of the Republic of Moldova, while enhancing their relevance to the labor market. To achieve this goal, the curriculum for 6 study programmes based on new teaching - learning methodologies, including problem-based learning (PBL), is expected to be developed, tested and implemented in partner universities in the Republic of Moldova. At the same time, training of academic and managerial staff in the field of PBL methodologies, the approach to learning outcomes and practices based on performant information technologies is foreseen. We will mention that at the State University of Moldova (SUM), the study programme developed according to the PBL methodology will be implemented in the Law specialty (Bachelor's degree).

In order to reach the goal of the project, a working team was formed, including members of the academic staff from the Law Faculty of the State University of Moldova. The team members made study visits at the AAU University of Denmark and the UK University of UoG, where relevant and useful data were collected to draw up this report.

These visits were largely concerned with analyzing the experience of implementing the PBL methodology, exploring the relationship between internal university structures and study programmes, including how the design and implementation of study programmes are integrated into the university at all levels: university management / faculty / department, etc.

This report strengthens the process and findings included in study visit reports and refers to: the methodology used to collect and analyze data; the analysis of the undergraduate education system in the Republic of Moldova (Bachelor's degree level), the comparative analysis of higher education systems in the Republic of Moldova, Great Britain and Denmark; conclusions drawn from the analysis based on clear benchmarks.

Also the pilot study programme for the law specialty (Bachelor's degree), to be implemented at the Faculty of Law starting with the study year 2017-2018 is included in the report, which will refer in the first stage only to the Anglophone groups.

The report also includes the Roadmap that comprises the implementation stages of the PBL-based study programme at the Faculty of Law, SUM.

The Law Faculty of the State University of Moldova is one of the oldest faculties in the Republic of Moldova. It was founded in 1959, the State University being founded in 1956. During the almost 70 years of its activity, the Law Faculty has trained thousands of specialists in the legal field who have activated in various fields of law: judges, prosecutors, lawyers, politicians, but also businessmen. Many of them hold high public positions in the state, contributing essentially to the development and prosperity of the Republic of Modova.

At present, the Faculty of Law remains one of the most prestigious faculties in the Republic of Moldova. However, in recent years there has been a slight decrease in the number of graduates of high schools wishing to study Law. This phenomenon is determined by several objective factors, such as: the creation of private institutions including the "Law" specialty, the increase in the number of people going to study in other states (Romania, Russia, etc.). The basic factor but also the most serious problem is the employment rate of young people in the labor market. The youth unemployment rate is 2-3 times higher than the country average. We underline that currently the reorientation of society's priorities is due to the emergence of the notion of "post-industrial society", which is largely interested in the fact that its own citizens are able to act actively, independently, to decide, to flexibly adapt to the conditions of modern life[1].

Given the inevitable growth of competition between higher education institutions training specialists in the field of law, but also to increase the employability of our future graduates, *it is imperative to review the teaching methods, rethink the whole teaching-learning process in the field of law, the improvement of the study programme in law.*

It should be noted that at the faculty of law, as well as in other faculties of the State University, traditional teaching and learning methods have been used for more decades, assuming more passive involvement of students, and usually referred to transferring knowledge from teacher to student.

The specificity of the PBL model is that the teacher does not have ready-made knowledge, but the students formulate a seemingly non-existent problem, being exposed to discovery and investigation. To appreciate the value of the PBL method, it should be noted that its application leads to:

- the formation of an active group work style;
- confronting other participants' positions;
- engaging intellectual skills;
- encouraging professional thinking;
- the cultivation of autonomy and courage in presenting his/her own position;
- developing critical thinking.

The principles of problem-based education are as follows:

- The problem as point of departure;
- Projects organized in groups;
- The project is supported by courses;
- Collaboration – groups, supervisors, external partners;
- Exemplarity;
- Student responsibility for learning[2].

Therefore, the PBL model involves the elaboration of a project in small groups of students (5-6 persons), the project having as a subject a research of a current and practical problem. At the same

[1] M.A.Malîșeva, Современные технологии обучения и их роль в образовательном процессе, Учебно – методическое пособие, Санкт-Петербург, 2011, p.12.

[2] Problem-based learning. Aalborg University, 2015, p.7.

time, this model encourages students to develop their communication skills, group activity, developing an analytical vision to solve the problem.

Problem-based learning, being based on student-centered learning and teaching, could help to change the traditional approach of the education process at the faculty of law as it plays an important role in stimulating student motivation, self-reflection and active involvement in the learning process. Student-centered learning and teaching is provided in p.1.3 of the Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG), approved at the Yerevan Ministerial Conference, 14-15 May 2015, and which has been taken over by the national educational standards[3].

Also, the principle of centering education on its beneficiaries is a fundamental principle of education provided by article 7 of the Education Code of the Republic of Moldova of 17.07.2014[4].

Concerning the definition of problem-based learning, opinions are diverse. Some consider the principle of problem-based learning as a fundamental didactic principle, on which the very existence of other methodological principles depends (Cerghit I, 1980). Others define the problem-based learning as a teaching method, and W.Okon, a supporter of the problem-based education, states that this is a "new theory of learning (1978)"[5]. According to Coombs and Elden, PBL is a learner-centered (versus content- or instructor-centered) method that challenges the learners to take a progressively increasing responsibility for their own education and is therefore consistent with the constructivist perspective[6].

Although the views on the essence of problem-based education are different, one thing is certain: taking into account the current higher education system in the Republic of Moldova, we have to implement new teaching methods, which, depending on their effectiveness, will eventually be treated as a learning theory.

Table 1. Work team - SUM

Members of the SUM working group	Scientific and didactic title, position held
Angela Niculiţa	PhD, associate professor, vice-rector of SUM
Ţurcan Liliana	PhD in law, senior lecturer, vice-dean, Faculty of Law, SUM, team leader
Belei Elena	PhD in Law, associate professor, Head of the Department of Procedural Law, Faculty of Law, SUM
Zamfir Natalia	PhD in Law, associate professor, Department of International Law and European Law, Faculty of Law, SUM
Vidaicu Mihaela	PhD in Law, associate professor, Department of Criminal Law, Faculty of Law, SUM

[3] (http://www.edu.gov.md/sites/default/files/esg_in_romanian_by_anosr_0.pdf - vizitat pe data 25.08.2016)

[4]Publicat în Monitorul Oficial al Republicii Moldova, nr.319-324 din 24.10.2014.

[5] A se vedea: Nina Socoliuc, Victoria Cojocaru, Formarea competenţelor pedagogice pentru cadrele didactice din învăţământul universitar., Chişinău.:Cartea Moldovei, 2007 (Tipogr."Reclama")-160 p.

[6] Introduction to the Special Issue: Problem-Based Learning as Social Inquiry—PBL and Management Education, Gary Coombs and Max Elden, *Journal of Management Education* 2004; 28; 523.

2 ANALYSIS AND SYNTHESIS OF SPECIALIZED LITERATURE

2.1 INTRODUCTION

The team of the Faculty of Law of the State University of Moldova researched and analyzed the specialized literature (provided by the project management) on the introduction and implementation of problem-based learning (PBL) in educational institutions in different states. The purpose of this analysis is to answer the following questions:

(1) how do we convince teaching staff and decision-makers to integrate the PBL model into the educational plan or discipline curriculum?;
(2) what are the peculiarities of a curriculum based on the PBL model?;
(3) how does the relationship between teacher and student, as well as between the educational institution and potential employers change?;
(4) what are the key aspects of the PBL model and how do we involve students?;
(5) what are the distance PBL peculiarities (using different distance learning platforms)?

The answers to these questions are relevant to the development of a new type of curriculum for the subjects to integrate the PBL model into the teaching-learning process. Due to the fact that implementing PBL means "transforming" *a content-based curriculum* into *a competence-based curriculum*, it is important to identify the key elements that can facilitate this process.

Unfortunately, the specialized literature provided by the project management does not contain examples or research to implement the PBL model at law faculties, focusing more on using this strategy in other specialties. For this reason, the implementation of this model of teaching-learning at the Faculty of Law is to be thoroughly analyzed, taking into account the specificity of the specialty and the openness of the teaching staff towards the change of the teaching-learning method.

Nevertheless, the researched literature is very useful for understanding the PBL model itself, how to implement it in other specialties, and its effects on the educational process, as well as on the professional growth of teaching staff. For these reasons, the literature review will focus on highlighting the most relevant aspects and processes that have taken place at different universities as well as the solutions proposed by different specialists to remove the obstacles in implementing a new teaching-learning model.

This analysis serves as a basis for choosing the right solution for the Faculty of Law, as well as for adapting the PBL model to the specifics of our specialty. The following sources (made available by project management) formed the basis for this research:

1. Terry Barett, Sarah Moore, *New approach to Problem-based Learning. Revitalizing Your Practice in Higher Education,* 2011;
2. Peter Schwartz, Stewart Mennin, *Graham Webb, Problem-based learning. Case studies, experiences and practice,* 2001;
3. Barbara J. Duch, Susan E. Groh, Debrah E. Allen, *The power of problem-based learning,* 2001;
4. John Biggs, Catherine Tang, *Teaching Quality Learning at University,* 2011;

5. Maggi Savin-Baden, Kay Wilkie, *Problem-based Learning Online*, 2006;
6. Alexia Papageorgiou, Peter McCrorie, Stelios Georgiades, Maria Perdikogianni, Psychology for Psychologists. *A problem base approach to undergraduate psychology teaching*, 2015.

2.2 POLICIES REGARDING THE STUDY PROGRAMME AND CURRICULAR CHANGES FOCUSED ON THE PBL MODEL

The process of implementing the PBL model in higher education institutions is a long-lasting one, as demonstrated by the experience of various institutions abroad. Analyzing these experiences, we chose two aspects relevant to the introduction of PBL at the Faculty of Law that we will look at in this paragraph: how do we "persuade" teaching staff to use PBL and what are the particularities of a PBL-based curriculum.

1. How do we "persuade" teaching staff?

The reluctance of teaching staff and decision-makers is one of the most commonly cited obstacles to implementing a new teaching-learning model or a new educational strategy. For these reasons, changing education policies at institution level, as well as developing new curricula, is a process that can take longer, and several educational institutions chose to introduce them gradually.

This is due not only to the need to train teaching staff, to change the way in which study programmes and discipline curricula are developed, or content change within disciplines, but also to the need to adequately endow educational institutions with spaces and equipment for the implementation of a genuine model of problem-based learning. Below are presented some methods used by some universities to change teachers' approach and promote new educational policies:

(1) *familiarizing teaching staff with the PBL model and explaining its effectiveness.* Although this can be done in different ways, a group of professors at Flinders University of Medicine, Adelaide (Australia), have decided to disseminate this model through a prestigious specialist conference. The method chosen by this group of teachers was to simulate a PBL-based lesson for all conference participants (the simulation was organized with the participation of students and teachers from another university). The simulation demonstrated that (1) students were highly motivated; (2) students have demonstrated a high level of critical thinking and problem-solving skills; (3) students have demonstrated impressive knowledge. Thus, although this way of "persuading" teaching staff about the effectiveness of PBL can be quite costly, it has more advantages than any other seminars or workshops organized in this regard.[7]

(2) *coverage of financial expenses for the involvement of teaching staff in PBL activities.* Motivating teaching staff to implement a new model of teaching-learning is difficult as long as the institution's budget does not allow their remuneration for their work. This obstacle is often rightly invoked when discussing the review of the study programme or changing the way of interaction with students. At both faculties of medicine and faculties

[7] Peter Schwartz, Stewart Mennin, *Graham Webb, Problem-based learning. Case studies, experiences and practice,* 2001, pag. 13-19.a

of law, teachers are very involved in practical work, in addition to academic activity, and this makes their motivation (especially in the context of austerity budget) even more difficult. This is even more problematic when it is attempted to change the approach (very well learned) of teaching staff towards the educational process and their role in the training of future physicians or, in our case, lawyers. One of the US Universities of Medicine has found a viable solution to cover part of the costs and motivate teachers to engage in the use of PBL as a teaching-learning method: with the support from administration, the use of the PBL model has been included in teachers' evaluation criteria for promotion, and in this way many departments have revised their way of assigning classes, and more and more teachers have been interested in implementing this model. It was a very great challenge: the transfer from classical lectures to small group activities led to an increase in the number of hours for each teacher; this change has led to greater responsibility for teachers and the dedication of several hours to the teaching process. The most difficult for educational institutions is to obtain and cultivate a leadership interested in developing and maintaining a curriculum based on PBL. In many cases, the need for change comes from students or young teachers who are trying to promote another way of approaching the educational process.[8]

2. Particularities of a PBL curriculum

Also, introducing a PBL model involves revising the curriculum of the subjects taught. Thus, developing a curriculum based on the PBL model is a difficult multidimensional management process of change. The core of this model is the work of students in small groups that are supervised by the teacher. Other curricular implications such as lectures, seminars, workshops for the development of certain skills must be planned in such a way as to lead to the creation of an integrated curriculum based on PBL. In this respect, the development of a curriculum should begin with the questions: (1) what knowledge does the student need and (2) what are the basic skills and abilities important for the graduates.[9]

Thus, the development of such a curriculum has the following features:[10]

1. the curriculum restructuring must begin with the identification of the basic skills the student needs to develop. These must be the foundation of the discipline and not the themes that the student will learn during the course. Identifying these skills is often a much more difficult process than it seems at the first sight because it requires careful analysis and determination of the most important skills for future professionals.
2. teachers turn into tutors or facilitators of learning, and this process is quite difficult. For this reason, teachers need training in order to understand their new role when developing a PBL-based curriculum.
3. encouraging individual learning of the student - students need a lot of guidance in their learning process (at least at the beginning). Obviously, this process involves a lot of involvement on the student's side, but also a lot of support and guidance (structuring) from the tutor. The role of the teacher is to help students develop and use problem-solving strategies. The result should be to reduce the number of hours of teaching and to increase the number of hours of student individual

[8] Ibidem, pag.20-26.
[9] Terry Barett, Sarah Moore, *New approach to Problem-based Learning. Revitalizing Your Practice in Higher Education*, 2011, pag. 7.
[10] Ibidem, pag. 231-235.

active learning. In this process the lectures become another source of information just like the specialized literature review or other way of collecting the relevant information.

4. if students are involved in internships, faculties must inform the prospective employers about the PBL model used in the educational process.
5. the process of facilitating student learning must encourage in-depth learning. This is to be done by the tutor / facilitator through various methods introduced in the curriculum.
6. the sources used by students in the learning process must be diversified, expanded and accessible to students, taking into account that emphasis is placed on student's individual research / learning.
7. students' assessment should encourage the working model with PBL. If the whole learning process is based on group work and the assessment is done individually, there is a confusion and misunderstanding about the learning model. The evaluation methods included in the curriculum should reflect the chosen educational process and constitute a new source / method of learning.

These are just some aspects that reflect the development of a curriculum based on the PBL model. It is natural for each teacher to integrate this model into the curriculum taking into account the specificity of the discipline, but without reducing the essential requirements for problem-based learning.

2.3 CHANGING THE RELATIONSHIP BETWEEN STUDENT, TEACHER AND EMPLOYER

The training of specialists to respond to the needs of the labor market is one of the core tasks of higher education institutions. Unfortunately, the theorizing of the educational process is one of the reasons that leads to a very large discrepancy between the knowledge and abilities obtained by the students at the faculty and those necessary in the practical activity. The PBL model is considered one of the learning strategies that reorients the educational process to solving real and practical problems, thus preparing students for productive professional activity. For this reason, many educational institutions abroad integrate this model into the educational plan.

As mentioned above, due to the specificity of the PBL model, the relation between the teacher and the student, the relationship with the potential employer changes significantly. In this paragraph, we will focus on the specificity of these relationships to explain the implications of the PBL on the interaction between stakeholders relevant to the educational process.

1. The teacher-student relationship

Within the PBL-based learning and teaching process the student becomes a partner in the educational process, and the teacher-student relationship is based on cooperation and collaboration. Students are seen not only as young learners but also as agents of change and promoters of the various effective mechanisms needed to the employers. The initiative regarding the involvement of the student as a partner in the educational process implies:[11]

1. encouraging students to adopt a holistic approach to learning;
2. capitalization of students' points of view / voice;
3. creating opportunities for projects / initiatives that come from students;
4. supporting the transition in and through the educational process;

[11] Terry Barett, Sarah Moore, *New approach to Problem-based Learning. Revitalizing Your Practice in Higher Education*, 2011, pag. 51; 54.

5. increasing autonomy and involvement in the learning process;
6. improving the curriculum;
7. informing and developing strategies and policies.

At the same time, the role of the teacher in this process is different. The teacher turns into a facilitator of the learning process. The role of a facilitator differs from the role of the teacher we are accustomed to. The facilitator has to supervise and guide students in their learning process, encourage student's individual work, and intervene whenever necessary to explain to the student the unclearness or difficulties faced by the student. In this respect, the facilitator's role is:[12]

1. to provide a favorable environment for learning;
2. to facilitate the learning process, but not to make mini-lectures;
3. to listen very carefully and actively to what the students say, to observe the learning process, the difficulties and the fun of the group;
4. to intervene, where necessary, on the basis of the observations made;
5. to ask questions in order to encourage critical and creative thinking;
6. to ask students to provide evidence for their statements and to analyze the sources they used;
7. to provoke students to link the theory with practice;
8. to encourage the debate on the most important issues;
9. to encourage students to have a qualitative and responsible learning process;
10. to encourage students to reflect on the learning process, developing the most important skills, and working in groups.

Thus, the facilitator literally helps the student learn and does not teach the student. The facilitator encourages students to question certain things, to clarify what they do not know, to integrate and apply their knowledge. The facilitator should encourage the participation of all group members in discussions, ensure good group dynamics, summarize group discussions, and evaluate students' activities.[13]

It is clear that changing the teacher-student relationship implies greater responsibility both from the teacher and the student in order to ensure or facilitate an effective learning oriented towards the development of skills and the accumulation of the necessary knowledge necessary for future specialists.

Facilitators / tutors must base their interventions on what the students are doing, and in order to do so, tutors / facilitators need to focus their attention on students and what happens in the group. They have to focus on what the students do / do not do, say / do not say, to keep their objectivity in order to observe the dynamics of the group. Thus, the tutor can observe how students analyze the problem, the group work process, the learning process of the students. Based on these observations, the tutor can develop learning activities for students.

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[12] Ibidem, pag. 10.

[13] Alexia Papageorgiou, Peter McCrorie, Stelios Georgiades, Maria Perdikogianni, Psychology for Psychologists. *A problem base approach to undergraduate psychology teaching*, 2015, pag. 26.

The training of the tutor is a continuous process, and the feedback from students and colleagues can help them improve their skills.[14]

For PBL implementation it is imperative to provide continuous training and guidance to future tutors.

2. Relationship with potential employers

In the implementation of the PBL model, the relationship with potential employers can be improved, and the practical aspects are increasingly integrated into the educational process. This involves integrating transferable skills identified with employers into the curriculum, as well as developing problems based on the experiences of potential employers. In fact, one of the main goals of PBL is to make students solve real problems or even involve them in solving practical problems provided to them by their potential employers.

A closer collaboration with employers would have a positive impact not only on the process of designing the study programme or the curriculum of the disciplines, but would also increase the employability of graduates of the Faculty of Law.

2.4 INNOVATIVE MODELS OF ACTIVE LEARNING AND STUDENT-CENTERED PBL

In this section we will refer to the particularities of PBL as a learning strategy, namely: (1) how we formulate a problem; (2) what is specific to group work; (3) students' assessment tools used in PBL. We have chosen namely these aspects because they are important in the process of developing a curriculum based on the PBL model. When implementing the PBL model, various active learning methods can be used and we will refer to them in the context of analyzing the three important aspects identified.

1. How do we formulate the problem?[15]

A problem to be used in the educational process must be:

- interesting and motivating;
- authentic, taken over from practical experience;
- formulated in such a way as to allow for more ideas / hypotheses in order to provoke discussions;
- multidimensional, with cognitive, social, emotional, ethical aspects etc.;
- to challenge students to achieve their learning objectives, to understand basic concepts, to develop working skills with common problems;
- to ensure the development of transferable skills (e.g. teamwork, information collection, critical thinking, creative solving of a problem).

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[14] Terry Barett, Sarah Moore, *New approach to Problem-based Learning. Revitalizing Your Practice in Higher Education,* 2011, pag. 217-218.

[15] Terry Barett, Sarah Moore, *New approach to Problem-based Learning. Revitalizing Your Practice in Higher Education,* 2011, pag. 18-34.â

Practitioners, potential employers and even students or graduates are often involved in formulating problems. This consultation contributes to the formulation of complex and real problems, but also interesting for the students' learning process.

Such problems can be focused on: (1) learning or understanding complex basic concepts for the subject taught (but essential to understand the subject); (2) passing through certain personal experiences (such as involving the student in preparing a real witness for a particular process), (3) simulating experiences (such as drawing up a contract based on certain requirements from a prospective client), digital experiences (use of photos, video / audio, blogs, web-sites, etc.)

The stages of formulating a problem are: (1) brainstorming (ideally with the involvement of practitioners and other relevant stakeholders), (2) describing the ideas obtained from the brainstorming process indicating the title of the problem, authors, date of elaboration, module / discipline, learning objectives and concepts, the exact problem that will be presented to students, the ways/methods used for presentation, how to implement the problem and the sources of learning, (3) identifying the necessary resources (including multimedia that can be used), (4) checking if such a problem had been previously formulated to avoid copyright conflicts; (5) the assessment of the problem formulated.

The problem must be formulated in such a way as to stimulate the use of knowledge already acquired and to facilitate the acquisition of new knowledge. The problem has to be complex because using a simple problem will not stimulate in-depth learning and will not provoke students to discussions.

Problems can be *structured* differently: (1) problems that contain all the information necessary to solve them; (2) problems that contain only a part of the factual circumstances (the rest of the circumstances are to be identified by the students), and (3) problems that contain very little information, where the students will accumulate the necessary information gradually.

The level of complexity of the problem should be carefully chosen as the purpose of the problem is to stimulate group learning rather than individual learning.[16]

2. Group work within the PBL model

Group work as an interactive teaching method is widely used in the faculties of law. However, in order to follow the philosophy of PBL, we are to identify those particularities of group or teamwork that stimulate group learning:[17]

(1) Group formation should begin in the early class hours in order to have enough time to consolidate as much as possible the teams formed. Consolidation of groups can be done by involving groups in different team building exercises, or by which group members will have the opportunity to get to know each other better from the perspective of learning and interaction within the group. One way the facilitator could efficiently allocate his / her time would be to invite some students who have already taken this course as co-

[16] Barbara J. Duch, Susan E. Groh, Debrah E. Allen, *The power of problem-based learning*, 2001, pag. 49.
[17] Ibidem, pag. 61-63

facilitators. The facilitator can propose to students to develop working rules within the group[18] or provide them with a set of rules already prepared.

(2) Roles within the group - students may be asked to assign their own roles within the group (the leader, the person who organizes the work of the group, the person who is going to present the work of the group, the person who collects the information). These roles can be changed during rotational work.

Group dynamics and group interaction are observed and monitored by the facilitator throughout the learning process, and the way the groups are organized can be tailored depending on the specifics of the discipline. However, other problems may arise in the group monitoring process, such as passivity of some group members, group disorganization, group monopoly, and others that have to be solved by the facilitator in a way that stimulates the interaction of group members and to emphasize the value of the contribution of each member of the group to achieve the joint result.

3. Students' assessment

Assessment of students involved in PBL activities is one of the most discussed aspects of this teaching-learning model. The assessment method chosen depends both on the success of this experience and on motivating students to engage in different learning activities. Evaluation methods also relate to how learning outcomes can be appreciated. The table below reflects some solutions in this regard.[19]

Learning outcomes (for skills development)	Evaluation/assessment tools
Obtaining / applying knowledge	Essay based on case study Written exam Schemes on certain concepts
Problem solving skills and argumentation / motivation skills	Triple Jump[20] Written exams or tasks Oral exam
Communication skills and teamwork	Participation in tutorials Written reports Role-playing Participation in online chats / forums
Individual learning skills	Raport individual Individual report Report on information search strategies Oral presentations / written reports

[18] Such as: (1) be on time to lessons; (2) come prepared for lessons; (3) inform members of the group if he/she will not come to classes on justified grounds; (4) respect the opinions, views and values of other group members. Failure to comply with these rules could lead to the score being lowered in the evaluation process for the person who ignored or disregarded them.

[19] Terry Barett, Sarah Moore, *New approach to Problem-based Learning. Revitalizing Your Practice in Higher Education,* 2011, pag.175.

[20] This evaluation method consists of three stages: (1) students receive a minimal information problem and should ask the facilitator as many questions as possible to find out more details of the problem (defining the problem); (2) students have to collect additional information and find the solution to the problem, then prepare a presentation (3) students present the solution and receive feedback.

Reflections	Reflection journal Oral presentation Portfolio

Grading / marking students can take several forms:[21]

1. at the exam, students can get a problem for the whole group plus a few individual tasks.
2. the teacher can only mark the solution presented by the group;
3. the involvement of group members may form a percentage of the final grade;
4. the teacher can only mark the group presentation.

With the implementation of the PBL model, there is a need to develop some recommendations for future facilitators on how the evaluation methods can be used. The involvement of specialists in pedagogy is welcomed for this purpose.

2.5 IMPACT OF INFORMATION TECHNOLOGIES ON PBL STUDENT-CENTERED LEARNING AND CURRICULUM DEVELOPMENT

Information technologies have become a useful tool in the educational process. Teachers can use both distance learning platforms to facilitate the learning process, and may include some IT tools in the curriculum of the discipline to help students collect the required information or present the results of the group.

There are several options that can be used to implement PBL:[22]

1. computer simulations - there are simulations specifically designed to facilitate student learning. These computational simulations also include student assessment programmes, taking into account how they learned at each session;
2. multimedia resources - the content of the course is made available to students on the web site or provided on electronic support, while tutorials are provided by email or online conference;
3. Blended PBL - is a combination of on-line and face-to-face interaction. For example, students learn using web materials that include: simulations, videos, demonstrations, or other resources. These materials facilitate face-to-face interaction.
4. PBLonline - assumes work in groups of 8-10 students to solve a problem using electronic resources to facilitate group communication (such as chatting, video conferencing, etc.).

These models can also be implemented in law faculties, but the technical endowment of the institution and the students' ability to work through such methods must be taken into account. These methods are quite costly. However, teaching staff can use other available electronic resources to

[21] Barbara J. Duch, Susan E. Groh, Debrah E. Allen, *The power of problem-based learning*, 2001, pag. 103-104.

[22] Alexia Papageorgiou, Peter McCrorie, Stelios Georgiades, Maria Perdikogianni, Psychology for Psychologists. *A problem base approach to undergraduate psychology teaching*, 2015, pag.5-7.

facilitate the student learning process (such as the Moodle learning platform, electronic materials and resources, video or audio, etc.)

2.6 CONCLUSIONS

The introduction of the PBL model at the Faculty of Law is to be done gradually. Curricula of disciplines are to be revised and adapted to the PBL concept to streamline the process of integration of problem-solving learning. In the following chapters, the possible options for implementing PBL at the Faculty of Law will be analyzed.

3 METHODOLOGY

3.1 THE METHODOLOGICAL FRAMEWORK

Research in any field needs to be done through methods, which in fact represent intellectual operations made by researchers in relation to the subject of knowledge. The basic methods used to elaborate the study that was the subject of this report were:

- the logical method (the procedure of the rational knowledge of the phenomenon by using laws and categories of logic: definition, analysis, synthesis);
- the comparative method (the procedure of the comparison process that is expressesed in the establishment of the similarities and differences between different phenomena).

Regarding the comparative method, we mention that the comparison of some research subjects requires for the beginning to be familiar with the essence and the basics of these subjects.

Particular importance in understanding the essence of problem-based learning, as well as in the development of the pilot programme based on PBL, had:

1. The *workshop* organized in Chisinau in the period of January 19-22, 2016, attended by representatives of Aalborg University (Erik de Graaf, Claus Spliid, Lars Peter Jensen), Denmark, as well as the representatives of six universities in the Republic of Moldova, including the State University.
2. Between 22-28 May, WP3 *Development Week* was held in Chişinău. During this week, the SUM team presented the main findings and needs for change at system, university, and study programme level. Also during that week, video conferences were held with representatives of AAU's and UoG's law faculties, where some uncertainties about PBL-based study programmes were discussed. In addition, on May 25, 2016, a press conference called "*Benchmark experience on student-centered, problem based, active learning*" was organized, attended by team leaders from 6 universities from the Republic of Moldova, including the SUM.
3. International Conference organized in Chisinau on October 27-28, 2016, entitled „*WHEN STUDENTS TAKE THE LEAD: ENHANCING QUALITY AND RELEVANCE OF HIGHER EDUCATION THROUGH INNOVATION IN STUDENT-CENTRED PROBLEM-BASED ACTIVE LEARNING*". The SUM team presented two articles at this conference: "PBL at Law Schools" (Authors: Ţurcan Liliana, Zamfir Natalia, Vidaicu Mihaela), "Using Visual Learning Tools for Teaching Criminal Law" (author: Vidaicu Mihaela).

Throughout 2016, team members from Moldovan universities conducted desk research, analyzing various bibliographic sources on the application of the PBL method in higher education institutions, as well as the effectiveness of this method compared to traditional teaching methods. The list of literature was recommended before the workshop was held in January 2016. Subsequently, 6 books were purchased for each university from the project account, with the purpose of research teaching-learning methods used in higher education.

In the first stage, the criteria and sub-criteria used to determine the institutional specificity and the essence of the study programme at the University of Denmark, the University of the United Kingdom, the State University of Moldova were identified. Criteria and sub-criteria were developed based on the methodology (Methodology template) attached to the WP3 of the project. As a result of this stage, an ***Annex 1*** Data Collection template was developed - a template for collecting the data needed for the study.

In the second stage, study visits were held at the universities of Denmark and Great Britain, where the members of the working teams had the opportunity to find answers to several questions related to the subject under discussion, discussing with the representatives of the academic staff, attending the theoretical and practical lessons, etc.

In the third stage, there were collected the data contained in the laws, other normative acts regulating the legal relations in the field of higher education. At the end of this stage, **the list of criteria and sub-criteria was revised and completed** according to the data collected.

Stage 4: As a result of stages 2 and 3, the Data Reporting Table for the State University of Moldova, set out in ***Annex 2***, containing the analysis of the information collected with reference to the case of the Republic of Moldova, was elaborated. It should be noted that AAU and UoG data reporting tables are included in Annexes 2 and 3 to WP2.

Stage 5: The same criteria and indicators were used to perform a cross-case analysis (***Annex 3***). The final step in the data analysis was to find common patterns but also variations that emerged in the process of the comparative analysis of three universities. This stage is reflected in ***Annex 4***.

I. Describe how the pilot study programme was developed

Two basic methods were used to develop the pilot study programme:

1. The rational selection method involving the use of the following procedures:
    a. consulting the bibliographic sources and the legislation in force. Team members have consulted several sources that have enabled to get a clear picture of traditional and non-traditional teaching methods.
    b. own observations made during the work visits (assisting the theoretical and practical lessons at various disciplines, attending workshops, master-classes, etc.)
    c. asking for the advice of academic staff at the law faculties of the AAU University and the University of UoG.
2. Creative selection method that works with other procedures:
    a. The Notebook of Ideas. Each member of the team came up with ideas, suggestions, proposals that were analyzed, selected, then accepted or rejected.
    b. Brainstorming, which implies that no proposal should be criticized until all possible proposals have been obtained; any proposal, no matter how strange it may be, is required to be considered together with others.

The members of the team responsible for drafting the pilot study programme organized several working sessions with the participation of the vice-rector of the SUM for didactic activity, the head

of the department of quality management of the SUM, the dean of the law faculty, the vice-deans, etc.

In the process of shaping the pilot study programme, the following actions were taken:

- *identifying disciplines* to which the PBL method may be applied. It has been decided to draw attention to the complex disciplines, which have an interdisciplinary character, that address several practical problems and which allow the formulation of some topics, current subjects, which could constitute research topics for projects to be made by small groups of students.
- *identifying the target group,* i.e. the student circle (all students or only students in some groups, years of study) to whom this teaching-learning method can be applied. It was decided that at the first stage the Anglophone groups of students should be involved in teaching and learning PBL model, starting with the fact that a total of 30 students are going to go to UoG University in mobility under the PBLMD project.
- *identifying teachers* who will apply the PBL method. It is worth mentioning that teachers who are part of the PBL team of the SUM have already begun to apply this method to the disciplines they are responsible for since the 2015-2016 academic year. It was decided that all teachers responsible for the Anglophone groups should be involved at the first stage, and later the number of teachers would be enlarged. It is obvious that, at first, teachers will need to be instructed on how to apply the PBL method, with more workshops and conferences being organized. Please note that team members have already explained at the meetings of their departments, what are the advantages of student-centered teaching methods, how the PBL method can be applied within the faculty of law.

II. Describe how the roadmap was developed

For the development of the roadmap, it was decided to outline on a clean sheet the ideal plan that would reflect the PBL model. Subsequently, the main steps that we are going to take to reach this plan were formulated. A primary formulation of the steps was carried out within the *WP3 Development week*, held in Chisinau in the period of May 22-28, 2016.

3.2 DATA COLLECTION

In order to make this report, the members of the working group studied the legal framework in force regulating the higher education system in the Republic of Moldova. In order to collect the primary and secondary data, the relevant information from the websites of the State University of Moldova was used, the literature was consulted, and working meetings were organized with the representatives of the management bodies of the SUM. Many issues or uncertainties regarding the elaboration of the PBL pilot study programme were discussed at the conference in October 2016, attended by team members from 6 universities in the Republic of Moldova, as well as by representatives of the universities of Denmark, Great Britain and Germany.

The data collected is shown in chapter 4 of this Report. ***Annex 2*** contains the data reporting table for the SUM case. This table was developed based on the template provided in Table 2.

Table 2: Data reporting template

Question/Problem	Data/Sources consulted	Findings	Memos/Reflections
L1: System level			
L2: University management level			
L3: Faculty/Department level			
L4: Study board level			
L5: Integrating disadvantaged students level			
L6: Physical environment level			
L7: Study programme level			
L8: Pedagogical training level			

For the purpose of collecting data on higher education in Denmark and the UK, study visits were made at AAU University and UoG University. The collected data were presented in WP2.

Some questions, ambiguities, and possible problems that may arise in connection with the implementation of the PBL method within the SUM's Faculty of Law have been actively discussed with colleagues at the AAU University's Faculty of Law during a study visit from November 13-26 2016. Thus, during the mobility, a series of meetings were held with Associate Professor Louise Faber (the person responsible for the team of the Faculty of Law of the SUM), Associate professor Marie Jull Sorensen, Associate professor Sten Bonsing, Assistant professor Gitte Soegaard, Associate professor Trine Schultz, as well as a video conference with Assistant Professor Alex Fomcenco. In addition, Mr. Romeo Turcan had an active involvement, who explained to the participants in mobility a series of topics related to the formation of the groups, the collaboration between the students and the potential employers, the kind of activity as a supervisor, the way of preparing the students for the exam, etc.

3.3 DATA ANALYSIS

In order to analyze the data, the comparative method was used. Multiple case studies were compared, each partner country being considered a case study. At first, the SUM's working teams, who participated in working visits to partner universities in the EU, conducted an in-house case analysis of study programmes in the law specialty of that country based on some criteria, properties and indicators. Then, the study programme of the SUM's faculty of law was analyzed.

The cross-case analysis, as presented in the comparative template (Table 3), allowed the reformulation of criteria, properties and indicators for each level.

Table 3: Cross-case analysis

Criteria, properties, indicators	SUM	AAU	UoG
L1 criteria, etc	Basic findings by levels	Basic findings by levels	Basic findings by level

The findings were recorded during the detailed case analysis, with various ideas, concepts, and principles being highlighted. Within these activities, common models and differences were sought, as well as possible changes in the higher education sector in the Republic of Moldova being anlyzed. For this purpose, a data reduction template presented in Table 4 was developed.

Table 4: Data reduction template

	Common patterns	Variations
L1: System level		
Criteria 1	Patterns	Variations
Criteria 2	Patterns	Variations
Criteria 3	Patterns	Variations

4 BACHELOR'S DEGREE STUDY PROGRAMME, LAW SPECIALTY, SUM

4.1 INTRODUCTION

The Faculty of Law of the SUM was founded on 1 October 1959. The disciplines were assigned to three chairs / departments: State Law; Law and Civil Process; Criminal Law and Criminalistics. It is one of the first and largest faculties of the State University of Moldova, which has as a basic mission the training of highly qualified specialists in the field of law.

Until 1992, the Faculty of Law was the only higher education institution training specialists in the field of law.

The Faculty of Law of the State University of Moldova is the main provider of staff for the labor market in the Law specialty. At present, the study process within the faculty of law is provided by 5 departments: Public Law, Private Law, Procedural Law, Criminal Law, International and European Law (http://drept.usm.md/bcategory.php?l=ro&idc=53&t=Subdiviziuni), acting in accordance with the Framework Regulation of the Department approved by Order of the Ministry of Education no. 671 of 06.08.2010, (http://usm.md/wp-content/uploads/2012/08/9.-Regulament-cadru-al-catedrei-2010.pdf), as well as the Regulation of the Academic Department of the State University of Moldova, approved at the session of the SUM's Senate of 26 February 2013, Minutes No.6 (http://usm.md/wp-content/uploads/2014/04/Regulament-Departament-USM.pdf).

4.2 SYSTEM LEVEL

4.2.1. Accreditation of study programmes

4.2.1.1. National external accreditation body

According to article 115 of the Education Code of the Republic of Moldova, no. 152 of 17.07.2014, the National Agency for Quality Assurance in Professional Education, which is an administrative authority of national interest, with legal personality, autonomous to the Government, independent in decision-making and organization, financed from the state budget and own revenues, was established and is now operational.

4.2.1.2. Accreditation procedure: methodology and evaluation criteria

The accreditation procedure is regulated by the Government Decision no. 616 of 18.05.2016 for the approval of the Methodology for external quality evaluation for the provisional authorization of operation and the accreditation of the study programmes and of the institutions of vocational education and training, higher education and continuous training and of the Regulation on the calculation of taxes on services provided in the external evaluation of the quality of study programmes and of the institutions of vocational education and training, higher education and continuous training.

It is developed in accordance with the following national and European (international recommendations) regulatory framework in the field:

- The Education Code of the Republic of Moldova no. 152 of July 17, 2014;
- The Regulation on the Organization and Operation of the National Agency for Quality Assurance in Professional Education, approved by the Government Decision no. 191 of April 22, 2015;
- Nomenclatures of professional training areas, specialties and qualifications, occupations / professions for the training of staff in institutions of higher education, vocational education and traiining and continuous training;
- European Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG 2015), developed by the European Association for Quality Assurance in Higher Education (ENQA);
- Recommendation of the European Parliament and of the Council of 18 June 2009 on the establishment of a European Quality Assurance Reference Framework for Vocational Education and Training (2009 / C 155/01);
- European Quality Assurance Framework for Vocational Education and Training (EQAVET Framework), developed by the European Network for Quality Assurance in Vocational Education and Training (EQAVET).

4.2.1.3. Relations of the accreditation body with the Ministry of Education

The National Agency for Quality Assurance in Professional Education performs on a contractual basis, at the request of the Ministry of Education, the evaluation of the quality of programmes and institutions offering professional training programmes in vocational education and training, higher education and continuous education.

In exercising its attributions, the National Agency for Quality Assurance in Professional Education has the duty to inform the evaluated institution and the Ministry of Education about the results of the external evaluation.

The Agency sends the decision on the external evaluation to the Ministry of Education and the institution / institutions, as well as places the decision on the Agency's website after exhausting the appeal procedures.

4.2.2. Quality Assurance System

According to article 112 of the Education Code, quality assurance in higher education is achieved through a set of actions for the development of the institutional capacity in the elaboration, planning and implementation of study programmes, which form and consolidate the trust of the beneficiaries that the institution offering education services meets and improves the quality standards in accordance with the mission assumed by it.

4.2.2.1. The existence of a national quality assurance system (QA)

Quality management in higher education is enssured:

a) at national level - by the Ministry of Education and by the National Agency for Quality Assurance in Professional Education;
b) at institutional level - internal quality assurance structures.

A fully functional quality assurance system involves two successive stages:

a) the provisional authorization, which is the act of establishing the institution and grants the right to carry out the educational process and to organize admission to studies;
b) accreditation, which grants, in addition to the rights stipulated in let. a) the right to organize the final examination, as well as the right to issue diplomas, certificates and other educational documents recognized by the Ministry of Education.

The National Agency for Quality Assurance in Professional Education consists of:

a) The Governing Board;
b) profile committees;
c) administrative apparatus.

Within the National Agency for Quality Assurance in Professional Education, the evaluation subdivision of the study programmes and institutions providing professional training programmes in higher education, the subdivision for the accreditation of the programmes and institutions offering professional training programmes in the higher education, the subdivision dedicated to the vocational education and training, and other subdivisions required to carry out its duties, set up by the Governing Board.

In addition to subdivisions, according to the Agency's own regulation on organization and operation, there are commissions on specialties, which draw up registers of experts-evaluators based on an open competition.

The executive management of the National Agency for Quality Assurance in Professional Education is exercised by the President of the Governing Board, assisted by the Vice-President and the Secretary General.

The Governing Board consists of 15 members: staff with scientific-teaching and scientific positions, one representative of the students and one representative of the business environment. Members of the Governing Board may not hold public positions / functions, rector or director of the educational institution.

The members of the Governing Board are selected by an open competition, with an international jury, from among all those interested, for a four-year term that can be renewed only once. The competition is organized by the members of the Governing Board. Eight new members of the Governing Board are elected every 4 years. The president, vice-president, and secretary-general of the Governing Board are elected from among its members for a four-year term.

4.2.2.2. The national QA body

The National Agency for Quality Assurance in Professional Education shall have the following duties and responsibilities:

a) to enforce the state policies in the quality area of vocational, higher and continuous education;
b) to develop in line with the European standards in the area and make public its own methodology of assessment and accreditation of the institutions providing professional training programmes and their programmes, and to propose them for Government's approval;

c) to formulate and revise periodically, based on the European and international best practices, the accreditation standards, the national standards of reference and performance indicators used in assessing and assuring quality in education;
d) to assess, on contractual basis, the institutions providing professional training programmes, as well as their programmes for the purpose of provisional authorization, accreditation, and reaccreditation in the vocational, higher and continuous education;
e) to carry out, on contractual basis, upon the request of the Ministry of Education the quality assessment of some programmes and institutions providing professional training programmes in the vocational, higher and continuous education;
f) o ensure the objectiveness and validation of the results obtained during the external assessment of the institutions providing training programmes and of their programmes;
g) to ensure transparency in the process of external assessment, including through publication of assessment results, etc.

4.2.2.3. Relations of the QA body with the universities

The higher education institution: a) requires a new study programme at the first cycle (Bachelor's degree), which is included in the Nomenclature of Professional Training and Qualifications for the Training of Staff in Higher Education Institutions (Cycle I). The external quality evaluation procedure for authorizing the provisional operation of study programmes and educational institutions shall be finalized by the Agency within 6 months from the date of application for external evaluation. Accreditation is requested and granted individually for each educational institution and for each study programme in order to obtain a distinct qualification - in higher education: for each study programme in the first cycle (Bachelor's degree), the cycle II (Master's degree) and III (PhD degree).

4.2.2.4. External quality evaluation procedure: levels, criteria

Quality evaluation in higher education aims at:

1) institutional capacity;
2) educational efficiency, including academic achievements;
3) the quality of initial and continuous professional training programmes;
4) institutional quality management;
5) the results of scientific research and / or artistic creation;
6) the consistency between the internal evaluation and the real situation.

4.2.3. Double degree programmes and recognition of professional experience

Double degree programmes are regulated by Article 92 of the Education Code of the Republic of Moldova:

Article 92. Joint higher education programmes

(1) The joint higher education programmes is a form of cooperation between two or more institutions jointly responsible for:

a) development and approval of the bachelor's degree/master's degree/doctoral degree programmes;
b) organization of admission;

c) academic supervision, awarding qualifications and quality assurance.

(2) The cooperation, as a rule, shall be organized within a consortium of the higher education institutions and other institutions and organizations.

(3) The joint qualification shall be awarded and the joint diploma shall be issued in one of the following formulas:

a) a joint diploma additional to one or more national diplomas;
b) a joint diploma issued by the institutions providing joint study programme without issuing the national diploma;
c) one or more national diplomas officially issued and the certificate attesting the jointly awarded qualification.

(4) The joint diplomas/certificates shall be issued in the languages of communication set within the partnership and in the English language.

(5) A joint programme of higher education shall assume that:

a) the member institutions of the consortium shall be provisionally authorized or accredited in the country of origin;
b) each member of the consortium shall have the authorization from the national authorities empowered for organizing the joint programme;
c) the students from each institution participating in the joint programme may study a period of time in the partner institutions, but not necessarily in all institutions of consortium;
d) the period of study for students in the partner institutions or organizations of the higher education institution shall be a substantial part of the joint programme;
e) the periods of study and the exams passed in the partner institutions shall be fully and automatically recognized, under the law;
f) the teaching staff from the institutions participating in the consortium shall contribute jointly and equally in the implementation of the study programme.

(6) The procedure for provisional authorization and accreditation of the joint higher education programmes shall be established by the National Agency for Quality Assurance in the Professional Education.

At present, within SUM there are double degree programmes only at the faculty of Foreign Languages and Literature.

4.3 UNIVERSITY LEVEL

4.3.1. Governing bodies of the university and university management bodies

Article 28 of the Charter of the State University of Moldova, no.7 of March 31, 2015 establishes that: The system of the governing bodies of the State University of Moldova consists of the Senate, the Institutional Strategic Development Council, the Scientific Council, the Council of Administration, the Rector, The Faculty Council, the Senate Office, and the Office of the Faculty.

4.3.1.1. Structure

The Senate is the supreme collective governing body of the State University of Moldova.

The Institutional Strategic Development Council (hereinafter referred to as C.D.S.I.) is the governing body of the State University of Moldova, which meets at least once in the quarter or whenever necessary at the initiative of the President or at least 1/3 of the number of members.

The Scientific Council of the State University of Moldova is the collective body that ensures the coordination of the entire doctoral activity within the University, providing institutional, administrative and logistic support to subordinated doctoral schools.

Within the State University of Moldova the application of the Senate decisions, of C.D.S.I., and the Scientific Council are provided by the **Council of Administration**. The Council of Administration consists of the Rector, Vice Rectors, Deans, Heads of Departments, Heads of Chairs, Heads of Services, and other university subdivisions.

The operative leadership of the State University of Moldova is exercised by the **Rector**, assisted by the Vice Rectors (Senate Office), with the support of the Council of Administration. The Rector is the budget executor of the State University of Moldova.

4.3.1.2. Duties

The Senate has the right to discuss any issue related to the educational and scientific research process as well as the SUM's managerial, social-economic and financial activity.

The Senate has mainly the following competencies:

- approves the Institutional Strategic Development Plan of the State University of Moldova and the current and prospective activity programme in accordance with the statutory and legal mission, objectives and rights;
- approves the University Charter, the Regulation on the operation of the Senate, the Regulation of the Institutional Strategic Development Council, the Regulation of the Scientific Council, the Regulation of the Administration Council, the Regulations for admission to studies, the regulations of the faculty, the academic departments, the chairs, as well as other internal regulatory acts;
- approves the establishment, reorganization and liquidation of the structural subdivisions of the University;
- presents candidates for conferring scientific and scientific-didactic titles (researcher, university professor, associate professor, university lecturer), in accordance with the legislation in force;
- organizes and conducts competitions for vacant scientific, didactic and managerial positions;
- approves training in initial and continuing professional training as well as master, doctoral and postdoctoral programmes.

CDSI has the following competencies and duties:

- to coordinate the development of the Strategic and Institutional Development Plan of the State University of Moldova encompassing the vision, mission, institution’s development

strategy and the main actions for a period of at least 5 years and to submit it to the Senate for approval;

- to monitor and evaluate the efficiency of using the financial resources and to submit the educational institution's draft budget to the Senate for approval;
- to approve the model-study contract and the amount of tuition fees;
- to take decisions, with the approval of the Senate, regarding the development and consolidation of the institution's patrimony – decision to be approved with at least 2/3 votes of the Council members.

The rector mainly has the following rights and obligations:

- coordinates the didactic, scientific, administrative, economic and financial activity of the State University of Moldova;
- issue orders and provisions on all fields of university activity;
- appoints in the post and dismisses the vice-rectors, according to the law;
- employs and dismisses heads of the University's structural subdivisions, who are not elected on a competitive basis;
- in case of a job/position vacancy, appoints and dismisses persons in managerial positions on a competition bases, who will exercise the interim function until the competition is announced in the established manner. The duration of the interim holding of the position shall in this case not exceed six calendar months;
- appoints, by order, to didactic-scientific, research or managerial positions, the persons elected on the basis of a competition;
- concludes individual employment contracts for the employment of university staff;
- approves the employment scheme and the functions within the State University of Moldova;
- enforces by order and ensures the implementation of the decisions adopted by the Senate, for Institutional Strategic Development Council, the Scientific Council and the Administration Council;
- is the finance and credit authorizing officer of the State University of Moldova;
- manages and supervises the formation and use of fixed and circulating funds of the University;
- opens accounts, including currency accounts, in banking institutions;
- signs cooperation agreements with institutions, enterprises and national organizations.

4.3.1.3. The election procedure

The Senate is elected for five years. Senate members are elected according to a representative quota for each faculty, subdivision, taking into account the following ratio: didactic-scientific body - 75%; students, doctoral students - 15%, auxiliary staff - 10%. The rector, vice-rectors, dean, chairman of the Trade Union Committee, director of the Library, director of the Information Technology Center, directors of affiliated institutions are members of the Senate by virtue of their functions. The Senate's executive will not exceed 101 people. The members of the Senate are elected by direct and secret vote from among the scientific-didactic, didactic and non-didactic staff - elected by secret vote of the teaching staff of the faculties, departments, scientific centers; from among

students - elected by academic groups and student associations; from among the representatives of the trade union bodies - elected by the trade union organizations, in accordance with the Regulation on the operation of the Senate of the State University of Moldova.

The candidate who holds a scientific degree of doctor and / or scientific-didactic and has at least 5 years of experience in higher education and research may be elected as a **rector** of the State University of Moldova.

The rector is elected by the general assembly of the scientific, didactic and teaching staff, and of the representatives of the students in the Senate and the faculty councils (the general assembly of the electors), with the majority vote. Elections are made by universal, direct, secret and freely expressed vote.

4.3.1.4. The governing body in charge of study programmes, teaching-learning and evaluation processes

Quality Management Department: curricular development and evaluation. It is guided by the Regulation on the Organization and Operation of the Quality Council, approved by the SUM Senate on October 29, 2013.

Mission of the department: implementation and monitoring of the quality management system, the professional training process at the first cycle, Bachelor's degree, and the second cycle, Master's degree, in the State University of Moldova.

The objectives of the department are:

1. Monitoring the education quality assurance structures within the SUM.
2. Ensuring the curricular conditions for the integration of the SUM into the European single educational area.
3. Assessment of the quality of conditions / resources, process and results of initial professional training within the SUM.
4. Organizing and coordinating internships.

Activities:

I. ***Quality assurance structures***

- Organizing the quality assurance system.
- Elaboration of indicators and methodology of quality assurance.
- Monitoring the quality assurance process.
- Elaboration of quality assessment criteria.
- Monitoring the activity of the Quality Assurance Boards.
- Drafting internal regulations.
- Coordinating the study programmes' development process.
- Coordinating the development and implementation of curricular support.

II. ***Curricular development***

- Monitoring the development of educational plans.
- Monitoring the development of standards / qualifications for cycle I – Bachelor's degree.

- Coordination of the curriculum development process, cycle I – Bachelor's degree.
- Monitoring the development of the course support.

III. ***Evaluation***

- Evaluating academic results
  - Determining the evaluation strategy.
  - Provide methodical support in developing assessment tools (tests).
- Evaluation of normative and regulatory documents of the educational process (plans, curricula, teaching materials).
  - Determination of criteria and indicators.
  - Providing methodological assistance.
- Didactic staff evaluation.
- External evaluation.
  - creating the conditions for carrying out the evaluation procedure
  - assisting in the external evaluation process

IV. ***Internships***

- Drafting Regulations.
- Monitoring the development of the internship programme / curriculum.
- Organization of seminars and conferences.
- Monitoring internships
- Concluding contracts of collaboration with institutions providing internships / work placements.

4.3.2. The organizational structure of the university

According to art. 23 of the Charter of the State University, approved at the session of the Senate of the SUM no. 7 of 31.03.2015, the State University of Moldova is structured on faculties, institutes, academic departments, chairs, laboratories, administrative departments, services, sections, offices and centers operating under this Charter and own regulations, approved by the Senate.

Organizational Structure of the University:

- Faculties
- Research units
- Department of Studies
- Quality Management Department: curricular development and evaluation
- Department of Organization and Evidence
- Human Resources Department
- Supply and Logistics Department
- SUM Syndicate
- The SUM newspaper

4.3.3. Objectives of the Strategy of the student-centered teaching-learning process (separate or embedded in institutional strategy): *innovative teaching and learning, IT use, emphasis on employability, internationalization of curriculum, acquisition of linguistic and intercultural competencies* (Document)

The Strategic Plan is a document defining the main directions of development of the State University of Moldova for the years 2016-2020 http://usm.md/wp-content/uploads/Planul-Strategic-al-Universitatii-de-Stat-din-Moldova-2016-2020.pdf

The strategic objective of the SUM: Developing and enhancing the quality of the educational offer.

4.3.4. The key structure responsible for organizing the student-centered teaching-learning process.

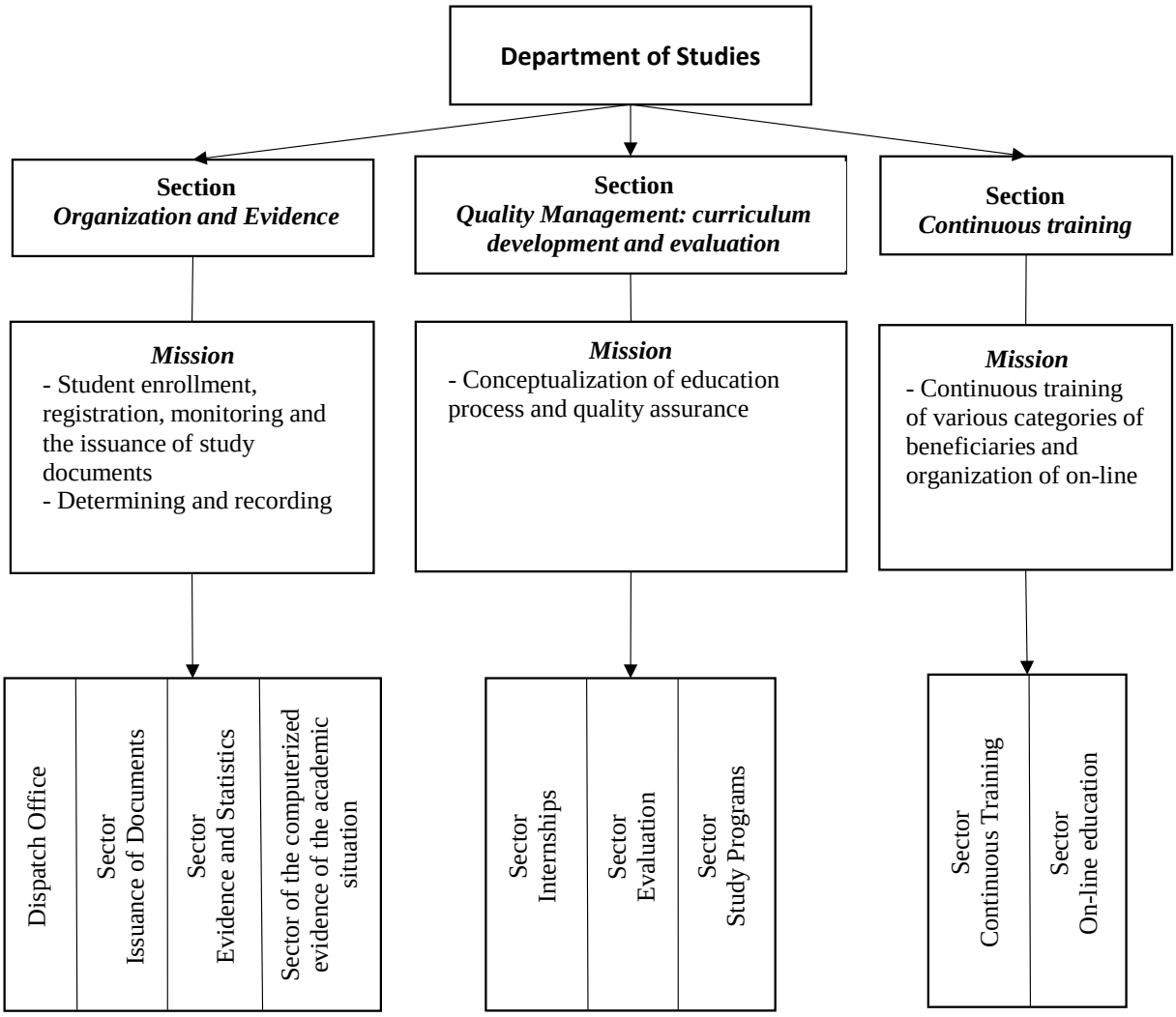
The *Department of Studies* is a subdivision of the university, operating on the basis of the Statute of the State University of Moldova, the normative documents regulating the education process in the Republic of Moldova, the orders of the Rector / Vice-rector for didactic activity. The basic **objectives** of the *Department of Studies* are the organization and technical-material and didactic assurance of the educational process as well as the formation and registration of the students and master students.

4.3.4.1. Duties and subordination.

The main duties are:

1. *Organization and provision of education process*
2. *Control of quality and efficiency of the education process*
3. *Evidence of students' mobility.*

4.3.4.2. Structure / Composition



4.3.4.3. Documents issued

4.3.4.4. Relationships with university's academic structures (faculties, departments, etc.)

1. In agreement with the deans of the faculties organizes and participates in the quality control of the study process.
2. Is responsible for methodological and technical assurance of the educational process.
3. Contributes to the implementation and use of new teaching technologies in the study process.
4. Analyzes and evaluates the effectiveness of the instructive-educational process.
5. Prepares statistical reports, information and materials requested by higher instances.
6. Performs control over the documentation of the deans' offices (registers, personal cards, grading cards and cards of students and master students, etc.).
7. Monitors the topics of the Bachelor's and Master's degree theses.
8. Makes proposals regarding the composition of the Commission for Bachelor Examination / Evaluation Commissions for Master Theses; prepares the schedule of the bachelor / master examination.

9. Makes proposals to the Rector for taking administrative measures in case of violation of the discipline by the teachers and by the students / master students.
10. Monitors and manages the admission of students, in agreement with faculty deans,
11. Draws up regulations and instructions regarding the organization of admission to the university;
12. Provides advertising during admission (editing of methodical materials, guides, broadcasting information on Radio and TV, etc.);
13. Ensures the timely preparation of the materials for the admission tests;
14. Organizes the study and implementation of the provisions of the normative acts on the admission regulation;
15. Prepares the draft of the admission order of the candidates for the year of study I.
16. Analyzes and prepares orders for admission, promotion and admission to the bachelor examination / defence of the master's thesis and the awarding of the title. Analyzes and organizes transfer, rehabilitation, expulsion, granting of academic leave, stimulating or sanctioning of students.

4.3.5. The University Quality Assurance (QA) system repeats the points above

The Quality Management Department: curricular development and evaluation is the university structure responsible for the quality assurance process at university level

Mission of the department**:** implementation and monitoring of the Quality Management System, the professional training process at the 1st Cycle, Bachelor's degree, and the 2nd Cycle, Master's degree, in the State University of Moldova.

Objectives:

1. Monitoring the structures of education quality assurance within the SUM.
2. Ensuring the curricular conditions for the integration of the SUM into the European single educational area.
3. Assessment of the quality of conditions / resources, process and results of initial professional training within the SUM.
4. Organizing and coordinating internships.

4.3.5.1. Duties

Activities:

I. ***Quality assurance***

- Organizing the quality assurance system.
- Elaboration of indicators and methodology of quality assurance.
- Monitoring the quality assurance process.
- Elaboration of quality assessment criteria.
- Monitoring the activity of the Quality Assurance Boards.
- Drafting internal regulations.
- Coordinating the study programme development process.
- Coordinating the development and implementation of curricular support.

II. ***Curricular development***

- Monitoring the development of educational plans.
- Monitoring the development of standards / qualifications for cycle I – Bachelor's degree.
- Coordination of the curriculum development process, cycle I – Bachelor's degree.
- Monitoring course support development.

III. ***Evaluation***

- Evaluating academic results
  - Determining the evaluation strategy.
  - Providing methodical support in developing assessment tools (tests).
- Evaluation of normative and regulatory documents of the educational process (educational plans, curricula, teaching materials).
  - Determining criteria and indicators.
  - Providing methodical assistance.
- Didactic staff evaluation.
- External evaluation.
  - creating the conditions for carrying out the evaluation procedure,
  - assisting in the external evaluation process.

IV. ***Internships***

- Drafting Regulations.
- Monitoring the development of the internship programme / curriculum.
- Organization of seminars and conferences.
- Collaboration with institutions - basis for practicing internships.
- Monitoring internships
  - Organizing training for trainee students.
  - Evidence and control of trainee students' activity.
  - Evaluation (organizing conferences for totalizing the results of trainee students).

4.3.5.2. Structure

Head of department: Coordinates the activity of the department in the following directions:

- Monitoring the activity of the Quality Assurance Boards.
- Monitoring the development of normative and regulatory documents.
- Monitoring internships.
- Coordinates the assessment of the quality of the educational process.

Deputy-head: Coordinates the activity of the department in the following directions:

- Organizing the quality assurance system.

- Monitoring the development of normative and regulatory documents: educational plans, standards / qualifications, curricula for cycle I - Bachelor and cycle II – Master's degree for the Faculties of Sociology and Social Assistance, Law, History and Philosophy, Journalism and Communication Sciences, Foreign Languages and Literatures, Letters, International Relations, Political and Administrative Sciences.
- Monitoring internships.
- Elaboration of quality assessment criteria.
- Organization of internal audit.

Deputy-head: Coordinates the activity of the department in the following directions:

- Organizing the quality assurance system;
- Monitoring the development of normative and regulatory documents: educational plans, standards / qualifications, curricula for cycle I - Bachelor and cycle II – Master's degree for the Faculties of Biology and Pedology, Chemistry and Chemical Technology, Physics, Mathematics and Informatics, Psychology and Education Sciences, Economics.
- Monitoring internships.
- Elaboration of quality assessment criteria
- Organization of internal audit.

Methodist: is responsible of:

- Providing methodical support in developing assessment tools (tests).
- Ensuring logistical support and data processing in the assessment of teaching staff.
- Ensuring the conditions for the performance of the evaluation procedure.
- Completing Analytical Programmes for graduates from previous years.

Coordinator of internships and labor market relations. Responsible of:

- Organizing and controlling the quality of internships.
- Coordination of the drafting of regulations, programme / curriculum of practical training / internships.
- Organization of seminars and conferences for internship coordinators.
- Organizing conferences for assessing internships.
- Establishment of the conditions of collaboration of the SUM with the institutions providing internships.

Programming engineer. Responsible of:

- Elaboration of the database for the Department of Quality Management: curricular development and evaluation.
- Typing the materials necessary for the activity of the department.
- Establishing relations with the beneficiaries of the services provided by the department.
- Processing questionnaires to assess the quality of various aspects of the educational process.
- Ensuring logistical support and data processing in the assessment of teaching staff.

4.3.6. Introducing Bachelor degree programmes

4.3.6.1. Structures empowered to initiate, elaborate and approve a study programme (to mention whether it is necessary to consult the career center, finance, library)

The process of developing and approving an educational plan for a new study programme involves the following steps:

a. the initiator of the new study programme (any interested person / group from the faculty / chair / department) and the members of the team designated by the chair / department management determine the disciplines in the educational plan and the list of scientific and teaching staff with competences in the field to be discussed in the faculty council. Following the endorsement of the programme, the educational plan and the staff of the new study programme will be drawn up;
b. after the endorsement in the faculty council, the study programme documents are submitted for approval to the Senate of the university. The final decision on the initiation of the study programmes is approved by the Council for Institutional Strategic Development, according to the legal provisions;
c. after the final approval, the faculty management appoints the team to prepare the self-evaluation report of the new study programme for provisional authorization;
d. based on these documents and correlated with the material basis provided for this programme, the final form of the self-evaluation report is elaborated. The self-evaluation report is submitted to the vice-rector for the teaching activity, to be verified by a commission designated by the sub-division responsible for quality management;
e. after the correction of any deficiencies, the self-evaluation report, implicitly the educational plan, shall be submitted, at least 6 months before the start of the study programme, to the Ministry of Education, which, after coordinating the educational plan, shall submit it to the National Agency for Quality Assurance in Professional Education for conducting the external evaluation for provisional authorization.

4.3.6.2. Requirements for the dossier content for new study programmes

Profile and structure of the educational plan

The educational plan for **cycles I and II** is structured in the following compartments:

a) the title sheet;
b) university timetable;
c) the plan of the study process on semesters / years of study;
d) internships;
e) the final evaluation forms at the course units / modules offered;
f) the final evaluation form of the study programme;
g) list of course units at free choice;
h) the matrix of correlating the learning outcomes of the study programme with those of course units / modules. Learning outcomes are part of national standards and their number, according to European practices, is recommended to be limited to 6-8.

The educational plan is accompanied by an *Explanatory Note* describing the profile of the specialty / field of professional training / general field of study, concretized in the *concept of training*

of the specialist (purpose, characteristics, employability, further training, pedagogical approaches, key competences developed in the programme) and expected *learning outcomes*. In the same context, the Explanatory Note presents information on: the degree of novelty, the relevance, the correspondence of the objectives of the study programme with the institutional development strategy, the consultation of the partners (employers, graduates, teachers, students) and the coordination of the programme development process according to the quality assurance standards.

Methods and evaluation criteria, rules on academic promotion will be also indicated.

4.3.6.3. Body approving the dossier

The Council for Institutional Strategic Development.

4.3.7. Learning-teaching and evaluation methods used at university (differences between approaches at different faculties / fields)

The teaching-learning process is based on the disciplinary curriculum, the academic courses, and the respective didactic design. Forms of organization of the study process combine judicially direct contact activities between teacher and student and individual work. Effective teaching strategies (modern, interactive, teamwork, etc.) are implemented in the educational process. The applied didactic strategies are adequate to achieve the competencies established by the National Qualifications Framework in the respective field. Various forms of organizing the teaching-learning process are effectively applied: integrative courses and seminars, problem-based, trainings, etc.

4.3.8. The structure responsible for cycle II / cycle III

4.3.8.1. Duties

GOVERNMENT DECISION No. 464 from 28.07.2015 for the approval of the Regulation on the organization of the second cycle – Master's degree studies. Published: 31.07.2015 in the Official Gazette Nr. 197-205

http://lex.justice.md/index.php?action=view&view=doc&lang=1&id=360103

In the second cycle of Master's degree studies there are offered:

a) Deepening programmes, which ensure the development of competences in a specialty in the field studied in Cycle I;
b) Interdisciplinary programmes that ensure the development of specific transversal competences in two or more fields of professional training;
c) Complementary programmes, which supplement the competences obtained in the Bachelor's degree studies, with a view to expanding the area of work placement.

The orientation of Master's degree studies can be:

a) scientific Master's degree studies, for the purpose of deepening in a scientific field and having the purpose of producing original scientific knowledge;

b) professional Master's degree studies, in order to train / strengthen professional skills in a specialized field and which can form a basis for professional career.

Within the Faculty of Law, a vice-dean is responsible for organizing admission to the Master's degree studies, approving and implementing master training plans, master students' assessment.

4.3.8.2. Relation with other university bodies responsible for approving the curriculum

The SUM's Department of Studies organizes and assures the education process in the second cycle similar to the same duties reported in Cycle I.

4.3.9. Documents on the policies and content of the curriculum

The reference framework of the university curriculum, approved by the National Curriculum Council of the Ministry of Education of the Republic of Moldova in 2015.

4.3.9.1. Study programme form (cycles I and II)

4.3.9.2. Examination policies and procedures form

4.3.9.3. Semester description (by programme) form

The temporal component of the educational plan is represented by the Academic Calendar, which includes the distribution of teaching activities by years, semesters (sessions in the case of part-time education), setting the deadlines and duration of the semesters, internships, examination sessions, final assessments and holidays. 3.2.2. Quantification of the academic year - in the full-time education one year of study is quantified with 60 credits, and the semester with 30 credits. In part-time education, the total number of credits is allocated proportionally over the years of study.

4.3.9.4. Module description form

4.3.9.5. Grading scale

Evaluation of learning outcomes is done with grades from "10" to "1". The grades from "5" to "10", obtained as a result of the course unit / module evaluation, allow obtaining the credits allocated to them according to the educational plan. The grade of the student's current assessment on the semester and the grade for the exam are expressed in integer numbers. The final grade at the course unit / module is calculated based on the semester grade and examination grade and is expressed in numbers with two decimals. The student who gets less than the grade "5" on the current evaluation is not allowed in the final evaluation. Grade 10 or "Excellent" (equivalent to ECTS - A) is given for the profound and remarkable demonstration of the theoretical and practical skills developed by the course unit / module, creativity and skills in the application of acquired competences, considerable independent work and versatile knowledge of literature in that field. The student acquired 91-100% of the material included in the course unit / module curriculum / syllabus. - Grade 9 or "very good" (equivalent to ECTS - B) is given for a very good demonstration of the theoretical and practical skills developed by the course unit / module, very good skills in applying the competences acquired, with some insignificant / nonessential errors. The student has mastered

81-90% of the material included in the curriculum (analytical programme) of the course unit / module. - Grade 8 or “good” (equivalent to ECTS - C) is given for the good demonstration of the theoretical and practical skills developed by the course unit / module, good abilities in the application of learning outcomes with a certain lack of confidence and inaccuracy related to the depth and the details of the course unit / module, but which the student can correct by answering additional questions. The student acquired 71-80% of the material included in the course unit / module curriculum (analytical programme). - Grades 6 and 7 or “satisfactory” (equivalent to ECTS - D) are given for demonstrating basic skills developed by the course unit / module and the ability to apply them in typical situations. The student’s response is unreliable and there are considerable gaps in the knowledge of the course unit / module. The student acquired 61-65% and 66-70% respectively of the material. - Grade 5 or “Poor” (equivalent to ECTS - E) is awarded for demonstrating the minimum competencies in the field of the course unit / module, the implementation of which faces many difficulties. The student has mastered 51 to 60% of the material. - Grades 3 and 4 (equivalent to ECTS - FX) are awarded when the student does not demonstrate the minimum competencies and additional work is required to promote the course unit. The student acquired 31-40% and 41-50% of the material, respectively. - Grades 1 and 2 or “unsatisfactory” (equivalent to ECTS - F) are awarded to the student who copied or demonstrated a minimum knowledge of the material from 0 to 30%. There is still a lot to do to promote the course unit.

4.3.10. Student involvement in university governance and management

The Student Self-Governing Structure (hereinafter referred to as “SAS”) is a representative student structure within the educational institution, non-governmental, non-affiliated, independent, non-profit; constituted on the basis of the voluntary principles and equal rights of students from different academic units of the higher education institution.

The Student Self-Governing Structure is the supreme representative body of all students within the higher education institution, made up of representatives of student formations and student organizations in the educational institution, officially recognized by the institution’s leadership, which includes several decision levels (institution, university cycle, faculty, specialty, academic group).

The Student Self-Governing Structure has a democratic decision-making and elective system and operates according to the University Charter and its own Regulation.

Within the higher education institution, the representation of the students is provided at the level of academic group, year of study, professional training programme, cycle of studies and is found in the institutional management structures: the Faculty Council, the Senate of the Higher Education Institution, the Ethics and Management Council, the Quality Assurance Committee.

Students can also be delegated to other relevant activities with a decisional, advisory or administrative role at the level of the higher education institution’s subdivisions.

In the Senate of the higher education institution and in the faculty council, the students are represented in proportion of not less than 1/5, but not more than 1/4 of the members of these structures.

http://usm.md/wp-content/uploads/ordinul_nr._969_din_10.09.14_regulamentul-cadru_cu_privire_la_organizarea_si_functionarea_structurilor_de_autoguvernanta_studenteasca.pdf

4.3.11. Student-centered teaching and learning approach at university level.

4.3.11.1. Mission / Strategy of the university

The Strategic Plan is a document defining the main directions of development of the State University of Moldova for the years 2016-2020 http://usm.md/wp-content/uploads/Planul-Strategic-al-Universitatii-de-Stat-din-Moldova-2016-2020.pdf

Strategic Objective of the SUM: Developing and enhancing the quality of the educational offer.

Strategic actions in this regard:

- Elaboration of educational plans, from the perspective of professional skills training, interdisciplinary approaches and current problems of the field of training.
- Developing the curriculum for the disciplines, focusing on the student's teaching process, with an emphasis on performing individual work and applying interactive teaching technologies.
- Realizing the educational partnership with employers' / labor market representatives in order to modernize professional training programmes.
- Maintaining the professional training process at the level of quality standards, ensuring the recognition of the competitiveness of the studies at SUM in the country and abroad.
- Increasing the international dimension of study programmes (study programmes taught in foreign languages).
- Ensuring the professional training process with highly competent scientific and teaching staff through continuous training.
- Use of modern technologies, including electronic platforms in the professional training process.
- Assessment by the specialty departments of the professional training services as a source of updating initial training programmes, a way to identify institutions - basis for internships, a way to set up an educational partnership.
- Promoting integrated / interdisciplinary study programmes.
- Modernizing and promoting participative quality management, with the active involvement of faculty structures (teachers and students) and labor market representatives. Implementing an effective internal evaluation and self-evaluation mechanism of the quality of the educational process.
- Modernizing the career guidance and career counseling strategy of students. Creating a mechanism to monitor graduates' professional development.

4.4 FACULTY / DEPARTMENT LEVEL

4.4.1. The relationship between the top management (university level) and faculty / department management with reference to student-centered teaching and learning

According to p. 34 of the Framework regulation on the Organization and Functioning of the Governing Bodies of the Higher Education Institutions of the Republic of Moldova, approved by the Order of the Ministry of Education No. 10 of 14 January 2015, the governing body of the faculty in the higher education institution is the Faculty Council, which is chosen for a five-year term. The members of the faculty council are, as a rule, persons with a scientific and scientific-didactic title. Elections take place within 10 days of their announcement. Students are represented in the the Faculty Council in the proportion of 1/4 of the total number of members. The duration of the mandate of the members of the Council among the students is one year, with the possibility of renewing the mandate. Ex officio members of the faculty council are the dean, vice-dean and heads of faculty's specialty departments.

Article 34 of the SUM's Charter states that the Faculty Council is the decision-making and deliberative body of the faculty within the State University of Moldova. (2) The Faculty Council is made up of a maximum of 75 percent of the representatives of the full-time scientific and didactic-scientific staff, **and 25 percent of the students' representatives**.

The operative management of the faculty and the decision making of the Faculty Council is carried out by the **Dean** and the **Office of the Faculty**. Between the meetings of the Faculty Council the operative management is carried out by the Office of the Faculty Council, which consists of: dean, vice-dean, secretary of the Council, head of the Quality Assurance Committee, heads of departments / chairs, student representatives.

The Regulation of the SUM faculty was approved by the SUM Senate on 26.02.2013 and was elaborated on the basis of the Framework Regulation of the faculty of the higher education institution, approved by Order of the Ministry of Education no. 671 of 06.08.2010. The faculty includes academic departments, chairs, centers, laboratories, extension and other subdivisions that ensure the initial and continuing training of highly qualified specialists. The structure of the Faculty is approved by decision of the SUM Senate.

The Faculty Council has the following attributions: a. **determines the development strategy of the faculty correlated to the University's strategic plan**; b. approves the strategic plan of the faculty; c. coordinates and monitors the process of assuring the quality of the teaching process at the faculty.

The Quality Assurance Committee is an advisory body of the Faculty Council that assures the quality of the teaching process within the faculty. The Committee is made up of representatives of: the Office of the Faculty, the Faculty Council, the teaching staff from each department / chair, **the students, the employer**.

The Quality Assurance Committee has the following tasks: a. applies the SUM policy in the field of quality assurance of the teaching process; b. implements the decisions of the Faculty Council

regarding the quality assurance of the studies in the specialties; c. coordinates, monitors and evaluates the quality assurance system at the faculty.

The Regulation of the Academic Department of the SUM's faculty was approved at the meeting of the SUM Senate of 26 February 2013, Minutes no. 6. According to this regulation, the establishment, reorganization, suspension of operation and liquidation of the Department are established by the Faculty Council and confirmed by the Senate of the State University of Moldova. The Department is headed by the Department Council, chaired by the Director. The department is a complex structural unit that assures, within the university autonomy, the entire teaching-scientific and research activities and includes didactic-scientific, research and technical staff, necessary for the efficient realization of the didactic-scientific and research process.

Responsibilities of the Department: 1. Developping and implementing **the concepts of professional training, research and innovation at all levels**. 2. **Drawing up curricular documents**. 3. Organizing, implementing, monitoring and evaluating the teaching process, including internships. 4. Organization, development, monitoring and evaluation of scientific research at national and international level. 5. Organization and monitoring of the individual and extracurricular work of the students: (elaboration of the annual and master's degree theses / projects, conduct of the Olympiads, of the scientific conferences, of the creative competitions and other extracurricular activities in order to cultivate, expand and deepen the knowledge of the students). 6. Expertising didactic and scientific works. 7. **Organization and performance of the continuous training of specialists in the field**. 8. Initiation of competitions for filling vacant positions in the Department. 9. Executing secretarial work.

4.5 BODY / STRUCTURE LEVEL RESPONSIBLE FOR THE DEVELOPMENT OF THE STUDY PROGRAMME

4.5.1. Structure of the body responsible for drawing up educational plans and curricula (see previous paragraphs)

4.5.2. The relationship of this body with the faculty, department and other structures within the faculty / department.

4.5.3. Creation of inter- and multidisciplinary programmes

4.5.4. The process of developing and approving new study programmes

The process of developing and approving an educational plan for a new study programme involves the following steps:

a. the initiator of the new study programme (any interested person / group from the faculty / chair / department) and the members of the team designated by the chair / department management determine the disciplines in the educational plan and the list of scientific and teaching staff with competences in the field to be discussed in the faculty council. Following the endorsement of the programme, the educational plan and the staff of the new study programme will be drawn up;

b. after the endorsement in the faculty council, the study programme documents are submitted for approval to the Senate of the university. The final decision on the initiation of the study programmes is approved by the Council for Institutional Strategic Development, according to the legal provisions;
c. after the final approval, the faculty management appoints the team to prepare the self-evaluation report of the new study programme for provisional authorization;
d. based on these documents and correlated with the material basis provided for this programme, the final form of the self-evaluation report is elaborated. The self-evaluation report is submitted to the vice-rector for the teaching activity, to be verified by a commission designated by the sub-division responsible for quality management;
e. after the correction of any deficiencies, the self-evaluation report, implicitly the educational plan, shall be submitted, at least 6 months before the start of the study programme, to the Ministry of Education, which, after coordinating the educational plan, shall submit it to the National Agency for Quality Assurance in Professional Education for conducting the external evaluation for provisional authorization.

4.5.5. The process of approving a new module in an existing study programme

It is similar to the procedure for adopting the new educational plan.

4.5.6. Evaluation practices / methods used

The student's learning activity, including individual activity, as well as the learning outcomes and competences acquired by the student are verified and appreciated during the semesters through current assessments as well as during examination sessions through final / summative assessments according to the educational plans. In order to increase the degree of objectivity and transparency of the evaluation process, current assessments and examination sessions, at the Senate's decision, can be carried out by means of information technologies – computer aided programmes through tests. The current evaluation is done during practical, laboratory and seminar classes and in intermediate sessions, via various ways: tests, papers, individual papers, portfolios, essays, case studies, etc. Written, oral and combined tests may be proposed. The concrete forms of assessment are established by departments at the beginning of the study year. In the semester there are one or two current evaluation sessions, proportionally allocated during the semester, which totalizes the intermediate situation of the student's success. The results of the current evaluation sessions are entered in the tally-sheets or the register of the academic group and are taken into account in the final semester assessments with an average weight of 60% of the final mark / grade at the course unit / module in Cycle I.

4.5.7. Involving students in the development of study programmes

The draft of the study programme is discussed with the students in advance in various forms (gathering of group leaders, collecting written opinions, endorsing at the student organization).

As the study programme is approved by the Faculty Council, student involvement is implicit because 25% of the total members of the council is formed by students and PhD students. The SUM Senate also consists of students, doctoral students - 15%, and approval of study programmes is within its competence.

4.5.8. Management of study programmes

4.5.8.1. Involvement of academic staff in the organization and coordination of a study programme

The study programme is developed by the academic staff, including staff with didactic-administrative functions. The office of the faculty, faculty council, and SUM Senate consist predominantly of teaching staff. Application deficiencies and proposals for improvement of the study programme are reported by the academic staff as a result of the continuous application process. Consequently, the organization and coordination of the study programme is the result of its effective implementation by teaching and academic staff.

4.5.8.2. The way this process is formalized

Proposals of the Departments shall be laid down in the minutes of their meetings, signed by the assistant and the Head of Department. The decisions of the Teaching Council are made in writing by its Secretary and by the Dean of the faculty. Decisions of the SUM Senate are kept by the Secretary of the Senate.

4.5.9. Review of a study programme

In line with the development of the socio-economic sector, higher education institutions will review / update their educational plans every 5 years.

The educational plan can be modified / improved provided it is implemented in the next year of study. During the studies of a student promotion, from enrollemtn to graduation, the educational plans can not be modified in the course of time, and they are to be completed in full.

If the labor market requirements dictate the necessity of introducing changes in the educational plans within 5 years, the new version of the educational plan for a new academic year will be applied to persons enrolled in studies in that year, provided that the changes were operated in the manner established by the end of the previous year of studies and were made public through the information system of the institution at least 3 months before the beginning of the study year.

Modification of the educational plans is carried out at the organizing chairs of the respective programme and approved by the faculty council.

The review / updating of the educational plans is validated by the university senates and presented to the Ministry of Education (as well as to the relevant ministries / professional associations, which have higher education institutions under the supervision), every five years. A copy of the minutes of the Senate meeting at which the changes were approved is attached to the copy of the educational plan for Cycles I, II and Integrated Studies.

4.5.9.1. Student feedback: procedure and impact

In accordance with the provisions of the Regulation on the Evaluation of the Teaching Staff, approved by the SUM Senate on 29 April 2008, student assessment is an important indicator for forming a correct opinion on the professional performance and moral attitude of the teaching staff and is done through questionnaires. The questionnaire is contained in one of the annexes to this regulation.

The assessment of staff and taught courses undertaken by students is done annually by completing evaluation questionnaires. At faculty level, the Quality Assurance Committee each year applies the questionnaire "The teacher in the student's view". Evaluation at institutional level takes place when the teacher participates in the "Teacher of the Year" and "The most successful didactic debut" contests, the Gradation of Merit.

The questionnaire on teacher evaluation at the institutional level is prepared by the Quality Management Section: Curriculum Evaluation and Development. At the faculty level, the questionnaire on the evaluation of the teaching staff is prepared by the President of the Quality Assurance Committee with the involvement of the Quality Management Section: Curriculum Evaluation and Development, after which it is discussed and approved at the meeting of the Quality Assurance Committee. The questionnaire is intended to provide data on the academic standard and the level of pedagogical-methodological training of the teaching staff.

Student assessment covers all teaching staff, from assistant to university professor and all disciplines at all forms of training, regardless of the form of education.

The results of the questionnaires are absolutely confidential, being accessible only to the Rector, the Dean, the President of the Quality Assurance Committee, the Head of the department and the evaluated person. Taking into account the principles of professional ethics, the results are analyzed and the conclusions are communicated at the meetings of the Quality Assurance Committee, the meetings of the departments, the meetings of the Faculty Council. The results are analyzed and processed in order to formulate policies on the quality of the educational process, as well as a personnel policy regarding the recruitment and promotion of the teaching staff.

4.6 LEVEL OF INTEGRATION OF DISADVANTAGED STUDENTS

Law no. 60 of 30.03.2012 on the social inclusion of persons with disabilities.

Within the SUM, there is the Training Center for poorly sighted students using special software.

The SUM's block of study nr. II, where the headquarters the faculty of law is located, recently underwent capital repairs, being created conditions for students with disabilities, including a special elevator.

At the level of organizing the teaching-learning process there are individual study programmes for students with disabilities.

The Faculty of Law of the SUM has dormitories, students with disabilities having priority in providing accommodation.

Similarly, students from disadvantaged groups are provided with education fee exemptions.

4.7 INFRASTRUCTURE

4.7.1. Facilities that provide / support student-centered learning and teaching process

The State University of Moldova has functional blocks where the students' study process and all other activities inherent to a higher education institution are carried out. The Faculty of Law of the State University of Moldova is located in the central university campus of SUM.

The Faculty administration and the 5 departments have their headquarters in Block 2, Block 2A and Block 2B in the central university campus. Course hours, seminars, and other activities related to the training process take place mainly in Block 2. Also, in Block 2 there are two conference rooms, the Anglofon group hall, the Francophone group hall, the simulations of court processes hall, etc. The area provided for a student corresponds to the appropriate training requirement.

In order to increase the quality of professional training, the study programme provides teaching activities in laboratories of Criminalistics and Legal Clinic. Here training takes place on the basis of the appropriate machinery, mechanisms and logistics, forensic techniques and methodology. Also, the Clinical Training course is carried out in the Legal Clinic laboratory, endowed with the equipment necessary to provide free legal aid by students to the vulnerable members of society. Guided by teachers, the chair guides upon a development plan of the Forensic / Criminalistics Laboratory.

Block 2, where the headquarters of the Faculty of Law is based, although subjected to capital repairs, unfortunately, **at the moment does not have enough IT means that would ensure the student-centered learning and teaching process.**

4.8 LEVEL OF STUDY PROGRAMME

4.8.1. The level of reflection of the learning-teaching process in the institutional strategy

4.8.2. Focus of the study programme

According to the SUM's Strategic Plan for the years 2016 - 2020, one of the strategic objectives is to develop and strengthen the quality of the educational offer. In this context, the proposed strategic actions are:

- Elaboration of educational plans, from the perspective of professional skills training, interdisciplinary approaches and current problems of the field of training.
- Developing the curriculum for the disciplines, focusing on the student's teaching process, with an emphasis on performing individual work and applying interactive teaching technologies.
- Increasing the international dimension of study programmes (study programmes taught in foreign languages).
- Promoting integrated / interdisciplinary study programmes.

4.8.3. The structure of the educational plan of the study programme

In the **first cycle**, **Bachelor's degree studies** and **integrated studies**, the academic year consists of two relatively equal semesters, which include two sessions of regular exams, internships and two holidays. The average duration of a semester is 15 weeks of direct contact with students.

The academic calendar, implicitly the period of deployment and duration of the examination sessions, the duration of the holidays shall be determined by the senate of the higher education institution. For the liquidation of arrears (credit deficiency recuperation) and / or the increase of the grade, two re-examination sessions (credit deficiency recovery) shall be programmed, which can be organized after each examination session during the holidays or, at the decision of the institution, can be merged into one session.

Study credits are allocated as follows:

a) for an academic semester - **30 transferable study credits;**
b) for an academic year - **60 transferable study credits.**

A study credit represents **30 hours** of learning activity, in all its aspects (didactic and research activities, class (direct contact) and individual activity) required from the student to achieve the learning outcomes.

The duration of the study week in the **first cycle, Bachelor's degree studies**, is 5 days, with a weekly number of **25-30 hours** of direct contact.

The educational plan includes the set of course units / modules distributed over semesters / years of study. By *degree of compulsoriness* and *possibility of choice*, course units / modules are classified into:

a) compulsory;
b) optional;
c) at free choice.

4.8.3.1. Students'

Institutional Regulation on the Evaluation of Academic Performance, approved by the SUM Senate on April 15, 2014 http://usm.md/wp-content/uploads/2014/05/2014-Regulament-de-evaluarea-randamentului-academic_REDACTAT.pdf

The student's learning activity, including individual activity, as well as the learning outcomes and competences acquired by the student are verified and appreciated during the semesters through current assessments as well as during examination sessions through final / summative assessments according to the educational plans. In order to increase the degree of objectivity and transparency of the evaluation process, current assessments and examination sessions, at the Senate's decision, can be carried out by means of information technologies – computer aided programmes through tests. The current evaluation is done during practical, laboratory and seminar classes and in intermediate sessions, via various ways: tests, papers, individual papers, portfolios, essays, case studies, etc. Written, oral and combined tests may be proposed. The concrete forms of assessment are established by departments at the beginning of the study year. In the semester there are one or two current evaluation sessions, proportionally allocated during the semester, which totalizes the intermediate situation of the student's success. The results of the current evaluation sessions are entered in the

tally-sheets or the register of the academic group and are taken into account in the final semester assessments with an average weight of 60% of the final mark / grade at the course unit / module in Cycle I.

Exams can be held only during the examination sessions scheduled according to the Academic Calendar of didactic activities. In part-time education, the student can take one exam per course unit / module a day, and the interval between 2 successive exams must be at least 2 days. In part-time or distance education, exams can be organized in a compact way or in parallel with the didactic activities.

Examination subjects / topics are approved by the head of the department and brought to the attention of the students at least one month before the session. Examination tests may be developed based on approved topics. Evaluation is based on the scoring scales that will be brought to the attention of the students when the evaluation results are displayed.

The time necessary to prepare the answer to the oral exam will be no less than 30 minutes, and the time required to complete the written test will be set by the course holder for up to 3 academic hours, depending on the form of assessment.

In the ordinary sessions the student is required to attend them with the group / study formation in which he / she is enrolled. In well-justified cases, the dean of the faculty may allow the student to attend the examination session with another group / study formation. In the arrears sessions, the student is given the opportunity to select from the planned dates when to attend the exam.

Persons who have been unable to attend the current / final evaluation session on justified grounds (in case of sickness, participation in republican and international competitions, etc.) justified by the respective documents (medical certificates, decisions, orders, provisions, etc.).), are allowed to do the assessments / exams based on a special timetable.

4.8.3.2. Evaluation of academic staff

4.8.3.3. The level of use of IT, e-learning and / or mixed learning platforms

At SUM, the MOODLE e-learning platform is used to manage on-line courses, to assess the student's independent / individual work, stipulated in the educational plans through a certain number of hours, and in the curricula by disciplines, in working methods, evaluation modalities and instrumentation. MOODLE offers teaching staff the opportunity to permanently refresh their content, guide and encourage learning. The electronic address of the university platform MOODLE is: www.moodle.usm.md

In the process of teaching-learning-evaluation, teachers from the faculty of law also use the faculty's website www.drept.usm.md where they place their courses. On the site of the faculty, the following teachers placed their courses: **(**www.drept.usm.md). Apart from these, teachers and students use PP technologies, the computer, the projector, etc. For years, amiable communication between teachers and students has been used. Each academic group has an electronic address.

ICT tools that are used both in full-time education and in part-time education require new digital skills and competences from both teachers and students.

The efficiency of ICT use lies in the following:

- performs effective control over the teaching and learning of the content;
- motivates / encourages students;
- realizes the innovative ideas of the university didactics - learner-centered teaching focused on the learning outcomes / skills;
- offers blended learning;
- replaces the traditional ex-chair lecture and informative education with an active participatory one and the use of new teaching technologies of the computer-aided learning;
- streamlining evaluation, managing individual work and assessing individual work.

There is a Computer-aided Learning Center at SUM. Guidelines / recommendations for use of the MOODLE platform (www.drept.usm.md) are being developed, the SUM's Continuing Training Department organizes trainings for teaching staff where they get familiar with the technology of using the MOODLE electronic platform and other ICT tools.

Recommendations are made on the assessment of on-line courses (www.drept.usm.md).

The quality of on-line courses, the results and the efficiency of ICT use in the teaching process, the need for their use are discussed at the chair meetings of the faculty, at the meetings of the Quality Committee of the faculty. There is also a need to endow the lecture halls with special equipments (projectors, interactive digital boards, etc.).

Through the consultancy provided by the Continuing Training Center and the Computer-aided Learning Center, both the students and the teaching staff are actively involved in the training sessions. The Continuing Training Center and the Computer-aided Learning Center, besides providing training courses, also provide permanent concsulatncy to teaching staff.

The use of modern technologies, including electronic platforms, in the training process is a strategic priority of the SUM, as evidenced by the presentations and discussions, the decisions made by the SUM's Council of Administration and the SUM's Senate.

The SUM Administration encourages the use of modern technologies by teachers through the Gradation of merit, the priorities offered in the process of employment on the competition basis (for a period of 5 years).

Courses are developed in accordance with the requirements stipulated and contribute to compenteces training.

About 600 faculty students are subscribed on the MOODLE university platform. They can subscribe individually or with the help of the administrator from the Computer-aided Learning Center. In total, 93 university courses are placed on the MOODLE university platform.

4.8.4. Elaborating, improving / modernizing and organizing / managing the study programme. (see paragraph 4.5).

4.8.5. Rules to determine the workload of academic staff (for different types of activities: teaching, supervision, evaluation)

The determination of the workload for scientific, didactic and research activity.

Norma ştiinţifico-didactică se constituie din:

The scientific-didactic workload consists of:

a) classroom didactic activity (direct contact with the students), realized by: - course hours; - seminars, laboratory works, practical works, design works, didactic / clinical internships and other forms approved by the Senate; - consultations for examinations;
b) non-classroom didactic activity, realized by: - supervision of internships; - supervision of didactic-artistic or sports activities; - supervision of the annual, the Bachelor's or master's degree projects or theses; - monitoring the individual student activity; - activities of evaluation and monitoring of academic success of students; - monitoring the extra-curricular educational activities of the students; - other activities covered by institutional regulations;
c) research, technological transfer, artistic, literary, journalistic, and sporting activity, realized by: - carrying out scientific researches, - publishing scientific articles; - elaboration and editing of monographs, scientific collections; - performing PhD / post-doctoral theses; - participation in scientific projects and coordination of scientific projects; - participation in scientific conferences, plastic art exhibitions, artistic festivals and sports competitions; - other activities covered by institutional regulations;
d) methodical activity, realized by: - preparing for the teaching of thecourse; - development of course materials; - didactic design of activities, including individual ones; - developing curricula; - developing methodological recommendations for students; - developing methodologies and tests for the evaluation of academic results; - conducting methodological seminars; - other activities covered by institutional regulations.

4.8.5.1. Student workload: calculation procedure and impact on curriculum development

The ratio between direct contact hours - individual study hours is determined according to the specificity of the course unit / module: the degree of novelty and / or complexity and didactic-methodical assurance. For Cycle I, the ratio applies: • 1 classroom-hour (direct contact) - 2 hours of individual activity; • 1 classroom-hour (direct contact) - 1 hour of individual activity.

The educational plan indicates the total number of hours foreseen for the study of each course unit / module.

The standard length of study of a course unit / module is one semester.

Planning the intensity of their study during the semester is done by the chair / department / faculty, based on the share of the module in the training of professional competences, as well as the fact that the weekly workload of the student can not exceed 30 hours of direct contact (up to 36 hours in the case of double specialties) for the first cycle, Bachelor's degree studies, and 14-16 hours of direct contact for the second cycle, Master's degree studies. Number of hours foreseen for each course unit / module, as well as their allocation for theoretical, practical, laboratory, individual work, etc. is determined by chairs / departments, taking into account the specificity of course units / modules and the learning outcomes for the given field.

The implementation of the curricular programmes and the regulation of the didactic process is carried out through the study schedule, endorsed by the dean of the faculty and approved by the vice-rector for the didactic activity.

The schedule of the course hours represents the regulatory document of the educational process. It is drawn up in accordance with the educational plan and the curriculum for each semester and is displayed at least 10 days before the beginning of each semester.

The disciplines will be spread over the days following the theoretical and practical classes to ensure the uniform distribution of the student's individual activity.

It is forbidden to provide for a day only theoretical hours / lectures or only practical classes / seminars, laboratories. It is not recommended that lectures and practical classes for the same discipline are scheduled in the same day.

The duration of an academic hour is 40-45 minutes and the duration of the breaks is 15 minutes. A working day will not exceed 6-8 academic hours of direct contact with the students.

The timetable is drawn up by the dean / vice-dean of the faculty and is approved by the vice-rector responsible for didactic activity.

4.8.6. Students' assessment

4.8.6.1. Regulations / guidelines available

The framework plan for higher education (cycle I – Bachelor's degree studies, cycle II – Master's degree studies, integrated studies, cycle III – Doctoral degree studies), approved by ME Order no. 1045 of 29 October 2015
http://usm.md/wp-content/uploads/ordinul_nr._1045_din_29.10.2015_plan-cadru_pentru_studii_superioare_ciclul_i_-_licenta_ciclul_ii_-_master_studii_integrate_ciclul_iii_-_doctorat.pdf

FRAMEWORK REGULATION on the organization of the final examination for Bachelor's degree studies, approved by ME Order no. 1047 of 29 October 2015 http://usm.md/wp-content/uploads/2015/11/final-Reg..pdf

4.8.6.2. Forms of assessment

The educational plan sets out the *assessment types and methods of the learning outcomes*, including*:*

a) *current assessment:* test, essay, report, case study (individual or in group), internship report, etc.
b) *final assessment:* oral examination, written examination, combined examination, essay, presentation, portfolio, thesis / research project.

It is recommended to diversify the forms of current assessment during the semester.

Academic results of students are evaluated:

a) during the semester;
b) at the end of the semester;
c) upon completion of the study programme within each cycle of higher education.

Final assessments of course units / modules will be done through exams with grades. „Admitted – rejected" grades can be used in mid-term evaluations in modules and in the Physical

Education course. Obtaining the grade to be promoted to a course unit / module implies the allocation of the credits foreseen for it.

Within the training programme based on advanced higher education, the third cycle, doctoral studies, the exams related to the course units / modules are organized upon the completion of the course units / modules.

The annual theses / projects are scheduled within the corresponding course units and are evaluated under the respective course unit.

If the annual thesis represents the cumulative result of activities from several courses, it is an interdisciplinary product and can not be attributed to a course unit, this annual thesis must be a separate entity, evaluated with a grade and estimated with a determined number of credits, depending on the effort required for its development, at the decision of the organizing chair / department / faculty.

4.8.6.3. Provisions for appeals

The student has the right to challenge the results of the final assessment if he / she does not agree with the teacher's decision on the grade given. The exam results can be challenged within 24 hours of the announcement of the results, based on a request made by the student to the dean. The Specialty Chair establishes a re-evaluation committee of at least 3 members, one of which is the teachear responsible for the course unit. The reassessment of the results takes place within 48 hours of the committee being set up. The committee's decision is final and incontestable. The student has the right to benefit from an increase of the grade. The increase of the grade is done by reassessment under the following conditions: The reassessment for the purpose of increasing the grade can be organized after doing all the evaluation tests provided in the study programme (the last year after the ordinary spring session). The student may request reassessment of 2 subjects from the educational plan to increase the grade. Only the student who, excluding the grades from the disciplines for which he / she requires reassessment, has the average grade of ≥ 9 (socio-humanities and economics) and average ≥ 8.5 (exact sciences, engineering sciences, natural sciences, agricultural sciences) can ask for an increase of the grade. The reassessment for the purpose of increasing the grade is performed by a committee created by the head of the department and is made up of at least 3 persons, one of whom is the course holder. The grade changes only in the sense of increasing. The committee's decision is final and can not be challenged.

http://usm.md/wp-content/uploads/2014/05/2014-Regulament-de-evaluarea-randamentului-academic_REDACTAT.pdf

4.8.6.4. Involvement of external examiners

In order to conduct the Bachelor's degree examination, there are established for the Bachelor's degree examination Committees (hereinafter referred to as the Bachelor's Committees) by professional training areas / specialties.

The chairmen of the Bachelor's committees are appointed by order of the relevant ministry, based on the proposals of the organizing institution. Specialists in the respective field (university professors, associate professors, scientific researchers, holders of honorary titles, highly qualified

practitioners), who do not work within the institution concerned, may be appointed as chairperson of the bachelor's committee.

http://usm.md/wp-content/uploads/2015/11/final-Reg..pdf

4.8.6.5. Grading system, study credits, and recognition of previous study results.

The educational plan provides the types and forms of assessment of knowledge, theoretical abilities and practical skills: a. current assessment: test, essay, report, case study (individual or in group), internship report, etc.; b. final assessment: oral examination, written examination, combined examination, thesis / project.

Depending on the specifics of the field of study / specialty, specific forms of evaluation can be used: computer-aided assessment, concert, exhibition, portfolio, sports test, etc.

The structure of the course unit, the volume and the duration of the study will be taken into account when determining the assessment method.

4.8.7. Incorporating into the programme and facilitating academic mobility

Framework Regulation on Academic Mobility in Higher Education, approved by Government Decision No. 56 of 27 January 2014. http://lex.justice.md/index.php?action=view&view=doc&lang=1&id=351368

The academic mobility of students, doctoral / post-doctoral students and teachers is organized on the basis of:

1) international treaties to which the Republic of Moldova is a party;
2) inter-university agreements / conventions;
3) agreements concluded between higher education institutions with enterprises and organizations from the country and from abroad;
4) agreements / contracts concluded by doctoral institutions and universities / scientific centers from abroad;
5) mobility programmes offered by various states and international / regional institutions / organizations;
6) individual contracts.

The period of study at the host university, including internships, shall be considered as an integral part of the home university's study programme if the host university's study programme corresponds, at least in part, to the home institution's study programme.

For students whose mobility objective is to prepare for bachelor's / master's degree thesis / projects, the maximum mobility period is one semester, as a result of which the students submit an ECTS document (European System of Transferable Academic Credits) that contains the evaluation results of student's activity during the mobility period.

Participation in individual academic mobility programmes is carried out on the basis of the order of the rector of the home higher education institution. Participants in individual academic mobility programmes benefit from the academic recognition of the programme under the terms of this Framework Regulation.

Students have the right to involve and participate in compact mobility programmes both at national and international level in order to complete the training process according to the chosen educational path. Mobility is organized by the higher education institution in accordance with the Regulation on the Mobility of Students and Teachers in Higher Education Institutions approved by the Ministry. It is possible the mobility of students between institutions and within the educational institution between related fields / specialties / specializations, respecting the specific regulations existing at the institutional level without affecting the study formations. In mobility programmes can take part students who have completed entirely the study programme for the previous academic year / semester. In the 1st cycle, mobility can be organized from the second year of studies, except for the last year of study. Students of the second cycle can participate in mobility programmes during one semester, except for the first and the last semester. Agreements between partner universities (faculties) guarantee the recognition of study periods and the transfer of credits for course units / modules performed. Recognition of study periods refers to their duration and content. The period of study in another institution replaces, by recognition, a period of study with a duration and workload (measured in credits) similar to the one the student had at the home university. The courses provided in the mobility contract can be equivalent to the courses in the home institution's educational plan, assimilable within the same field of professional training / specialties, acceptable as an alternative to existing courses. The student involved in mobility programmes on the basis of partnership agreements signed between the home institution and another institution will provide proof of the activities carried out, the exams passed and the credits accumulated upon return. The transfer of ECTS credits, the recognition, equivalence and documentation of student performance throughout the mobility period is done through the Transcription of Grades / Extract from the ECTS transcript which reflects quantitatively and qualitatively the work done by the student. The student is not obliged to negotiate the acceptance / recognition / equivalence with the teaching staff. The recognition / equivalence / acceptance of activities / exams / periods of study is approved by the Dean upon the recommendation of the coordinator / counselor / teacher. Credits obtained previously at similar course units / modules as expected learning outcomes, content, eventually name and extension (number of hours in the educational plan) are automatically equated in both mobility programmes and at student's transfer from one higher education institution to another. The student who chooses course units with a content overlap of at least 2/3 accumulates the credits allocated to only one of them. At the student's request, credits for a course may be equated to credits obtained at another equivalent or higher course (with more hours and a more detailed volume) at another university, faculty or specialty.

http://usm.md/wp-content/uploads/ordinul_nr._1046_din_29.10.2015_regulamentul_de_organizare_a_studiilor_in_invatamintul_superior_in_baza_sistemului_national_de_credite_de_studiu_0.pdf

4.8.8. Academic requirements for enrollment in the study programme

In order to acquire and maintain the status of student, the applicant must initiate and complete: a. enrollment / re-enrollment procedure in a study programme; b. promotion procedure from year to year. The way of organizing and carrying out the admission to the first cycle, Bachelor's degree studies and integrated studies is done in accordance with the provisions of the Regulation on the organization and conduct of admission in the higher education institutions of the Republic of Moldova, approved by the Ministry and the institutional regulation.

4.8.9. Monitoring the employability of programme graduates.

At the SUM, the career guidance of students and the follow-up of their professional development is done by the Center for Career Guidance and Relations with the Labor Market http://usm.md/?page_id=107&lang=ro

The Career Guidance Center collaborates with the Dean's Office (in the case of the Law Programme, all 9 departments are responsible for the programme), in order to create a student and graduate database for organizing career guidance activities (trainings, seminars, presentations).

This collaboration is also maintained in the professional tracking process. The Dean's Office determines the number of graduates employed by communicating with institutions in the field of law. The Career Guidance Center establishes the number of graduates employed by communicating with graduates (via email, facebook, telephone).

The competitiveness of the graduates of the study programme on the labor market exceeds 70% of graduates employed in the last 5 years in the courts, prosecutor's office, law offices, notary offices, Ministry of Justice, judiciary executors, Ministry of Internal Affairs, National Integrity Commission, Department of Penitentiary Institutions.

The tracking of the professional path is also conducted according to various criteria:

- employed in the specialized field;
- employed in other areas of professional activity;
- those that are not available (contact is largely lost due to emigration and seasonal activities outside the country).

We consider as a success of the programme the employment in the field of professional training and other fields, because the competences obtained are welcome for individual entrepreneurial activities, activity in the field of economy, services, management etc. The educational institution ensures graduates of the programme the continuation of their studies at the master's in accordance with the Regulation on the organization of Master's degree studies, cycle II.

4.9 PEDAGOGICAL TRAINING LEVEL

The specialist in the field of law is assured by the integrity of the university student's personality, with an emphasis on developing a responsible behavior, active involvement in their own professional training. The training process of the specialist in the field of law is correlated with the directions of strategic development of the SUM - education, research, international relations, communication and image.

Achieving these dimensions is ensured by:

a) normative and regulatory basis of the SUM (Regulation on Quality Management of Educational and Research Services; Regulation on the Organization of the Educational Process; Regulation for the Evaluation of Academic Efficiency);
b) by the SUM's teaching stafff (their level of qualification, personal and professional image as a specialist in the field, communication and relationship with students);
c) the conditions for conducting the educational process.

In order to ensure that teachers' level of teaching is appropriate to the programme's mission and outcomes, training courses, thematic seminars on psychology, university pedagogy, rhetorics, ICT are organized by the Department of Continuous Training. The Quality Assurance Committee has a special place in the methodical training of faculty staff, which organizes activities according to university and faculty priorities.

The teaching staff working on a full-time basis (with a full-time position) who provide the study programme in Law benefit from psychological and pedagogical training according to the Order of the Minister of Education of the Republic of Moldova no. 125 of 7 March 2012. Of the total number of teaching staff working on a full-time basis at the faculty of law, among which there are associate professors, having psychological and pedagogical training by virtue of their scientific-didactic title, those who are not associate professors have psychological and pedagogical training within their master's degree studies or hold graduation certificates of the continuous training course at the psychological and pedagogical module.

As a rule, the graduates of the faculty, future university professors, choose to continue their studies at the Master's degree also at the study programme in Law and, at their free choice, they can acquire the necessary psychological and pedagogical skills within the discipline Didactics of the University Education which is provided by the Continuing Training Center.

At the institutional level, the university ensures the maintenance and development of the teaching staff competences by promoting a policy of continuous training of the teaching staff, by organizing, at the level of institution and faculty, free of charge thematic courses for their improvement.

The University promotes and manages the professional career of each teacher by ensuring the continuous training of the teaching staff in accordance with the Strategic Development Plan of the university, faculty and department. In order to achieve these objectives, on 30 March 2010, the Continuing Training Department was set up within the institution, alongside which the Continuing Training Center (CFC) is also active. The objectives of continuous training, the organization and management of the continuous training process can be viewed on the web page http://usm.md/?page_id=610&lang=ro and the Regulation on continuous professional training of the SUM.

The institution periodically organizes continuous training courses for teachers at the Psycho-pedagogical module.

The strategic plan of faculty and specialized departments reflects the policy of promoting staff according to competencies and results, interested in a fruitful activity according to the data described in the Annual Reports of the specialized departments, which are kept at each profile / specialized chair.

The policy of promoting staff according to competencies and results, interested in a fruitful activity, is carried out according to the Regulation on organizing and conduct at the State University of Moldova of **the Teacher of the academic year** and **the Most Successful Didactic Debut** contest. Decisions to support and promote staff according to competencies and results obtained are reflected by awarding the title of **Teacher of the Year** and **The Most Successful Didactic Debut**.

Teaching staff competence allows them to generate training programmes, further develop and improve educational curricula, their pedagogical and scientific outcomes, innovative work in the field of pedagogy, and training field itself. It is worth mentioning that the didactic staff also participate in continuous training seminars for their improvement organized by other institutions in the country, but also abroad.

More and more attention is paid to the didactic strategies aimed at active student learning. Interactive strategies are determined by curricular objectives that require action to apply knowledge and integrate it in order to be able to make value judgments, decision-making, and problem solving. This is done by applying different interractive, active-participatory teaching methods by the teachers.

The application / implementation of the curriculum is ensured by the methodology of: designing the professional training process (the design reflected in the curriculum expresses the curricular approach oriented towards competence training and focused on the achievement of the objectives); carrying out the professional training process (monitored by the Quality Assurance Committee within the faculty, the Quality Assurance Council of the SUM by student questioning, attending classroom hours, analyzing / discussing public lectures); evaluating the professional training process (application of the assessment methodology based on tasks with varying levels of complexity, reflecting curricular objectives).

5 COMPARATIVE ANALYSIS

5.1 INTRODUCTION

Comparative analysis of study programmes within the SUM and European partner universities within the PBLMD project was carried out during the year 2016. Not only were the study programmes at SUM, AAU and UoG universities compared, but also organizational and operational aspects of these universities. Thus, the comparison had a multiaspectual character, which allowed a system analysis of the university system in the three countries that were the subject of the study.

5.2 CRITERIA, PROPERTIES AND INDICATORS

Comparison criteria were formulated in accordance with the methodology attached to WP3 (see Annex 1). However, we note that some criteria have been revised, either due to lack of information or due to the repetition of some compartments (see Annex 3, elaborated on the basis of Table 3).

Table 3. Comparative analysis

Criteria, properties, indicators	SUM	AAU	UoG

5.3 COMMON PATTERNS AND VARIATIONS

The comparison of the three universities under the study allowed the formulation of some common patterns largely related to the organization and operation of universities. However, some differences or variations were found, mainly referring to the structure of the study programmes, the way of adopting them, the endowment of universities with IT facilities that would allow the effective implementation of the PBL model, the involvement of employers in the elaboration of study programmes, etc. See Annex 4 developed on the basis of Table 4.

Table 4: Data reduction model

	Common patterns	**Variations**
L1: system level		
Criteria 1	Patterns	Variations
Criteria 2	Patterns	Variations
Criteria 3	Patterns	Variations

6 PILOT STUDY PROGRAMME FOR THE "LAW" SPECIALTY

6.1 INTRODUCTION

In order to facilitate the process of elaborating the law study programme with the implementation of the problem-based learning, the data on the application of PBL were collected and analyzed during the study visits at two universities: the AAU University of Denmark and the UoG University of the UK.

The purpose of this chapter is to perform the comparative analysis of the data collected with reference to the specificities of the law study programmes at two European universities, which will allow for a clear vision for the administration of the Faculty of Law regarding the necessity to improve the study programme by: optimizing the structure, content of disciplines, planning a larger number of practical hours in relation to the theoretical ones in order to ensure its high quality by incorporating the PBL method and increasing the employability of the graduates.

The next step in the data analysis process was to identify models of good practice in developing a pilot study programme based on student-centered learning with the introduction of PBL. For this purpose, a pilot project of the study programme for the first cycle, bachelor's degree studies at the Faculty of Law of the SUM, was elaborated to ensure the implementation of educational standards based on the European model, to elaborate the plan for their implementation in all the institutions that organize training in the field of law, to propose the mechanism of their subsequent legalization.

6.2 PROGRAMME OUTLINE

The aim of the specialization is to teach modern and practical knowledge in the field of law. The graduate will know the main areas of the law system of the Republic of Moldova, the fundamental institutions of law, and the obtained theoretical and practical knowledge will give him / her the necessary skills to work as a lawyer.

In this context, the Law specialty aims at achieving the objectives by:

1. Forming the professional skills of the graduate based on the theoretical and practical training in the field of law.
2. Developing research skills in the field of jurisprudence based on scientific component. In this respect, the specialist is trained to investigate contradictory problems in the jurisprudence.
3. Ensuring the conditions for multilateral development of the future specialist, forming his / her civic position and ethical dimension of his / her personality.
4. Să posede suficiente cunoştinţe de limbă străină pentru a fi capabil de a lucra în mod eficient în domeniul juridic;

Upon completion of the Bachelor's degree studies (Cycle I), the student shall have the following *general competencies:*

1. Ability to learn independently;

2. Ability to respect and develop values and professional ethics;
3. Ability to exercise the profession as a member of a team;
4. Ability to solve problem situations;
5. Ability to make decisions on its own;
6. Have sufficient skills in the knowledge of foreign language to be able to work effectively in the legal field;
7. The ability to use information technologies in research and legal practice.

Professional competences:

1. Knowledge of the legislation of the Republic of Moldova, European legislation and other international legal instruments;
2. Knowledge of concepts, theories, paradigms and methodologies in the legal field;
3. Use the necessary knowledge to collect data and information on a concrete problem of law;
4. Use of methods applied in the field of law;
5. Apply specific techniques and instruments in the legal field in solving practical problems;
6. Use of a wide range of techniques, methods and procedures for enacting interpretation of normative acts;
7. Initiate and identify the legal problems proposed to be solved in the legal activity process.

The professional competences acquired during the initial training have a substantial contribution to the organization and implementation of justice in the Republic of Moldova. The training provided by the study programme in the field of professional training in Law constitutes the basic training for the professions: judges, prosecutors, court clerks, judicial assistants, heads of court secretariats, probation counselors, legal professions related to the justice sector: lawyers, registrars, mediators, bailiffs, judicial experts, administrators of the insolvency procedure, translators / interpreters need an initial training in the field of jurisprudence.

In addition, all sectors of the national economy (businesses, institutions, public or private organizations) require legal assistance from law specialists.

The European integration to which our country tends creates the imperative need for specialists in the field of international law, national and international human rights protection, etc. and not just qualified specialists in law, but specialists with knowledge of at least one modern language, with advanced computer skills, group communication skills, managerial skills, and so on which are successfully offered by the study programme in the field of professional training Law.

Analyzing the practice of European universities, the team established for the elaboration of the study programme with the application of PBL proposes a pilot study programme to be applied from September 2017 in the training process of the English learning group. The experience of implementing this pilot study programme will allow identification of key impediments and the development of a strategy for improvement and adjustment to the new established objectives, which will help to incorporate these ideas into the educational plan in all the groups of students studying law.

According to p. 24 of the Framework Plan for Higher Education, approved by the Order of the Minister of Education no. 1045 of 29 October 2015, the educational plan includes the set of course

units divided into semesters / years of study. By degree of compulsoriness and possibility of choice, the course units are classified into:

a) compulsory;
b) optional;
c) at free choice.

At the same time, depending on the function in the initial professional training through general competences and specific competencies, the offered course units are grouped into the following components:

a) the *fundamental* component *(code F);*
b) the component of *training general skills and competences (code G);*
c) the *socio-humanistic orientation* component *(code U);*
d) the *specialty* component - basic and secondary, in the case of simultaneous training in two related fields *(code S).*

According to point 30 of the Framework Plan for Higher Education, the course units / modules in the fundamental component (code F), the training of general skills and competences (code G) and socio-humanistic (code U) constitute the **core of the training programme**, which represents the basic **compulsory** formative structure in the training of the future specialist in **the first cycle** and in **the integrated studies** common to several areas of professional training within a general field of study. Point 32 of the above mentioned Framework Plan provides that the **specialty oriented** course units ensure the individual element of the professional training and represent a package of compulsory / optional course units / modules, based on the logic of the structure of the field, in accordance with the labor market trends, thus ensuring an increased level of relevance of studies and employability of graduates. Point 36 of the Framework Plan provides for the establishment of the individual training path, according to the aspirations of professional development and the employment prospects. The optional course unit at the time of its selection becomes compulsory.

Thus, the courses listed for the application of the PBL are to be selected and incorporated into the curriculum of disciplines with practical application, held by the teachers involved in the project and who have been trained in the implementation of PBL. These disciplines are from the fundamental, specialty and optional categories.

Taking into consideration the decision made at the meeting convened by the administration of the University and the Faculty of Law, which was attended by the team for the elaboration of the study programme with the application of PBL, we consider it appropriate to introduce PBL as follows:

in the 1st year of study, *I semester - Constitutional Law (F);*
II semester - Administrative Law (F);

in the 2nd year of study, *III semester* - one of the optional disciplines (diplomatic usages and techniques, juvenile delinquency, medical law, comparative legal systems) at the free choice of the students,

IV semester - Criminal Law. Special Part (I) (F), EU Institutional Law (S);

in the IIIrd year of studies, *V semester* - Civil procedural law. General part (S) and Criminal Law. The special part (II) (F),

VI semester - Drawing up civil procedure documents (S) and the Legal Protection of Human Rights (S) discipline;

in the IVth year of studies, *VII semester* - Comparative constitutional law (S) and European Convention on Human Rights (S).

In order to achieve the proposed concept of the pilot project, the current educational plan will not be modified; only the revision and adaptation of the PBL concept to the curricula of the selected disciplines being required, starting with the identification of competencies, elaboration of a clear methodology for problem formulation and ensuring the guidance of the group work, formulation of assessment methods. In conclusion, the work on the project will accumulate for the most part the practical hours and the hours provided for individual work.

The deepening of practical knowledge as well as the development of professional skills will be ensured through a problem-based training programme in the legal field. The didactic and research process seeks to capitalize the traditions of national and Western legal education.

In order to ensure effective implementation of the PBL model, it will be necessary to introduce and develop the following specific competences into the study programme:

1. Awareness of the key issue in the area of interrelation between the legal fields,
2. Using theoretical and practical knowledge for the development and / or original application of ideas,
3. Making a diagnosis of research problems and formulating judgments based on incomplete or limited information,
4. The manifestation of leadership and innovation skills in the context of studies that are unknown, complex and unpredictable, and which require solving problems involving many interfering factors,
5. The critical evaluation of the strategic performance of the teams,
6. The manifestation of autonomy in the problem-solving process,
7. Communicating research results, methods to a specialist audience, using appropriate techniques,
8. The manifestation of an active behavior towards a series of social, scientific and ethical aspects that occur in collaboration.

Figure 1: Outline of BSc in Law

Year I Semester I	F.01.O01 General Theory of Law	F.01.O.02 Constitutional Law (**project**)	F.01.O03 Roman Private Law
	S.01.O.04 Legal-State Institutions	G.01.O.05 ICT G.01.O.10 Physical education	U.01. A.06 Philosophy U.01. A.07 Psychology U.01. A.08 Politology

			U.01. A.09 Sociology
Year I **Semester II**	F.02.O.11 Civil law (introduction and persons)	F.02.O.12 Administrative Law (**project**)	F.02.O.13 Criminal Law. The general part (I)
	U.02.A.15 History of Romanian Law U.02.A.16 Legal philosophy	G.02.O.17 Foreign language G.02.O.22 Physical Education	U.02.A.18 Economics U.02.A.19 History of European culture and civilization U.02.A.20 European integration U.02.A.21 The culture of interpersonal and organizational communication
Year II **Semester III**	F.03.O.23 Criminal Law. General part (II)	F.03.O.24 International public law	F.03.O.26 Civil law (real rights)
	S.03.O.25 Contraventional law	S.03.O.27 Financial law	**(project)** S.03.A.28 Diplomatic usages and techniques S.03.A.29 Juvenile delinquency S.03.A.30 Medical Law S.03.A.31 Comparative legal systems
Year II **Semester IV**	F.04.O.32 Civil law. The general theory of obligations	F.04.O.33 Criminal Law. Special Part (I) (**project**)	S.04.O.34 Tax law
	S.04.O.35 EU Institutional Law (**project**)	S.04.O.36 Family Law	S.04.A.37 Armed conflicts law S.04.A.38 Comparative criminal law S.04.A.39 Information Law S.04.A.40 Organization of legal professions

			S.04.A.41 Legal Regime of Real Estate S.04.A.42 Right to social protection
Year III **Semester V**	F.05.O.43 Civil law. Translatable Property Contracts	F.05.O.44 Criminal Law. Special part (II) (**project**)	S.05.O.45 Criminal procedural law. General part
	S.05.O.46 Civil procedural law. General part (**project**)	S.05.O.47 Environmental Law	S.05.O.48 Criminology
Year III **Semester VI**	F.06.O.49 Civil Law. Service providing contracts. Succession.	S.06.O.50 Criminal procedural law. Special part	S.06.O.51 Civil procedural law. Special part.
	S.06.O.52 Private international law	G.06.O. 53 Professional ethics	S.06.A.54 Qualification of offenses S.06.A.55 Transport and insurance law S.06.A.56 Consumer protection law S.06.A.57 Drawing up civil procedure documents (**project**) S.06.A.58 Drawing up criminal procedure documents S.06.A.59 Notarial law S.06.A.60 Legislative technique S.06.A.61 Legal Protection of Human Rights (**project**) S.06.A.62 International banking law
Year IV **Semester VII**	S.07.O.63 Business law	S.07.O.64 Criminalistics	S.07.O.65 Labor Law

	S.07.O.66 International trade law	S.07.A.75 Customs law S.07.A.76 Intellectual property law	S.07.A.67 Labor litigation S.07.A.68 Competition law S.07.A.69 Criminal executional Law S.07.A.70 Civil executional law S.07.A.71 Comparative Constitutional Law (**project**) S.07.A.72 Current Problems of the General Theory of Law S.07.A.73 Law of the European Convention on Human Rights (**project**) S.07.A.74 Methodology for the investigation of certain categories of offenses
Year IV **Semester VIII**	Specialty internship	Research internship	Bachelor's degree exam

6.3 DESCRIPTION OF THE STUDY PROGRAMME

The educational plan reflects the respecting of the principles of content selection and the creation of conditions of conducting an effective educational process. Taking into account the fact that the educational institution is an institution providing education services and that the education offer must correspond to the student-centered learning demand, the educational plan is structured in such a way that it allows for a relative openness and flexibility in order to ensure the needs of the formation of independent thinking and professional training through the application of the problem-based methods, with less emphasis on the traditional responsibility of transmitting information only. The link between theory and practice is achieved not only by combining different study disciplines, but also by encouraging professional thinking in the development of students' joint projects guided by teachers and external evaluators, through the judicious correlation of studies with internships.

The duration of the studies is four years divided into eight semesters.

The share of disciplines is quantified in ECTS credits, totaling 30 credits / semester, 60 credits / year, 240 credits / cycle I, Bachelor's degree studies.

The educational plan for the study programme in Law foresees 76 course units (disciplines) of which:

39 compulsory disciplines

37 optional disciplines

37 free choice disciplines

14 disciplines with application of the problem-based learning method (**PBL**).

Of these:

Basic formative structure	**Credit components**	**Course units**	**Orientation towards a specialty** **Number of credits**
Common trunk	I. Fundamental course units **(F)**	**14 disciplines**: General Theory of Law, Roman Private Law, Civil Law, Criminal Law, Criminal Procedural Law, Civil Procedural Law, etc.	**79 credits (33%)**
	II. Course units to develop general skills and competences **(G)**	**4 disciplines**: Information Communication Technologies, Professional Ethics, Foreign Language; Physical education	**10 credits (4%)**
	III. Socio-humanistic orientation course units (**U**)	**10 disciplines (of which 2 modules):** Psychology, Sociology, History of Romanian Law, Politology, History of Romanian Law, Economics, Legal Philosophy, European Integration (15%).	**27 credits (11%)**
Individual path	I. Course units focusing on the basic specialty **(S)**	**56 disciplines:** Criminal Procedural Law, Civil Procedural Law, Labor law, Contravention law, Financial law, Family law, Customs law, Tax law, Private international law, Business law, Environmental law, Forensic science / Criminalistics, Criminology, International trade law, Intellectual property law, etc.	**99 credits + internships (20 credits) + Bachelor examination (5 credits) - (52%),** of which: optional (in year II - 14%, in years III and IV - 23%).
	II. Course units in which the central and compulsory element is the project activity in the group (**PBL**)	**14 disciplines:** Constitutional Law (F), Administrative Law (F), Diplomatic Usages and	**27 credits (11%).**

		Techniques, Juvenile Delinquency, Medical Law, Comparative Legal Systems, Criminal Law. Special Part (I) (F), EU Institutional Law (S), Civil Procedural Law. General part (S), Criminal Law. Special Part (II) (F), Drawing up Civil Procedure Documents (S), Legal Protection of Human Rights (S); Comparative constitutional law (S), European Convention on Human Rights (S)	

The disciplines that develop general instrumental, interpersonal and systemic competences by studying socio-humanistic disciplines, coded by G and U in the educational plan: Informational communication technologies, Foreign language, Physical education, Politolgy, Psychology, Sociology, History of Romanian law, Economics, Philosophy, Legal Philosophy, History of European Culture and Civilization, European Integration, Culture of Interpersonal and Organizational Communication (**15%**).

The disciplines in the educational plan are presented in a logical sequence so as to provide the student with the continuity of the legal subjects, the development of general and specific competences.

The educational plan includes the total number of hours allocated to each discipline (direct contact hours and individual work hours), the number of hours per week, the form of assessment, the number of credits allocated.

THE CONTENT OF THE EDUCATIONAL PLAN

Programme Content

Code	Module / Discipline	Total hours	Including		Week			Form of assessment	Number of credits
			Direct contact	Individual work	Lecture	Seminar	Laboratory		
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.

The correlation between the number of hours and credits corresponds to the provisions of the Framework Plan (1 study credit for 30 hours of classroom activity (direct contact) and individual activity). The correlation between hours of direct contact and individual work follows the recommendations of the Framework Plan. The introduction of the PBL method involves the accumulation of most of the practical hours and hours forseen for individual work.

The content of the educational plan shows that in the 2nd, 3rd and 4th years of studies the number of optional disciplines increases, allowing students to choose the specialty disciplines they will need in practical work, depending on the work/position they will do/hold.

The study programme incorporating PBL is a combination of fundamental and compulsory speciaty modules, optional diciplines and the project. The role of the supervisor is well defined. He / she becomes mentor, guide. In the curriculum the premises for the collaboration with employers are set, including for internships within national and international organizations. The role of supervisor in PBL in law studies is achieved through teaching in small groups (2-5 people).

Pursuant to point 65 of the Framework Plan, the obtaining of the promotional mark / grade at a course unit / module implies the allocation of the credits foreseen for it. The number of hours and credits is determined based on the weight of the content unit for the training of professional skills. In order to ensure a thorough training of professional skills and to prevent students from overstressing during the sessions, most of the content units are credited with 4, 5, 6 academic credits. Only disciplines in related areas are modulated.

The study programme comprises 8 semesters, the successful completion of which enssures the allocation of 240 credits.

The academic year begins on September 1 and has a duration of 30 weeks. The academic year has two semesters, of 15 weeks and two sessions each. The academic week lasts for 5 days. In semesters III and IV there are planned 60 hours of initiation internship in the specialty, and in the 8th semester - specialty internship and Bachelor’s degree internship.

The duration of the examination sessions comprises the statutory requirements and at least two days are reserved for each exam.

Recovering the credit deficit is done through recovery sessions.

During the academic year, there is planned the Christmas holiday of about three weeks and the summer holiday lasts about 9 weeks. In the second semester, a weeklong Easter holiday is provided.

In the full-time education the study year is quantified with 60 credits, and the semester with 30 credits respectively.

CURRICULUM ON DISCIPLINES

The curriculum of the study disciplines is a normative-regulatory document based on which the study process is organized. Initial professional training based on the curriculum establishes the junction between the learning outcomes of the teaching process and content. All the disciplines in the educational plan are carried out based on the curriculum as a normative- regulatory didactic document. The curriculum of the discipline has the following structure:

- **Preliminaries** (brief presentation of the purpose of the discipline, its role and importance in the training of the specialist, project activity argued as a central and mandatory element);
- **Administration of the discipline**, structure element that reflects the weight of the discipline in the context of the entire teaching process (the total number of hours) and the

share of the amount of hours that the student undertakes with the teacher under different forms of didactic activity: course and seminar, work performed in a group project. The correlation of the hours in the auditorium, the guided hours of the group work (direct contact) and the individual working hours is determined depending on the didactic-methodological assurance of the discipline and is usually:

- 1 hour of direct contact - 1 hour of individual activity;
- 1 hour of direct contact - 2 hours of individual activity.

Here is also included the *Indicative allocation of the themes to the course and the seminar*, the element of structure that determines the weight of the content, a certain problem in the context of the training of the specialist, as well as the correlation between the content, the problem addressed and the way of solving it. This concordance is established on the basis of respecting the didactic principles by deducing on the basis of the concept the predominantly theoretical (course) or mostly practical (seminars and monitoring of group work) didactic approach:

- **The competences** obtained by the student through the study of the discipline with the formulation of the specific competences of training based on problem in the legal field;
- **The general / standard objectives of the discipline** reflecting all the theoretical knowledge, skills and competences that the student acquires by studying the discipline of study from a theoretical point of view and gaining practical skills following the project realization in group with practical applicability;
- **Reference objectives and contents**. This section specifies the student's concrete acquisitions as a result of studying a concrete topic. On the one hand, the contents (traditional element of the analytical programme) are indicated, and on the other hand there are presented the reference objectives describing the student's compartment at the level of knowledge, skills and competences. The correct formulation of the benchmark objectives creates the prerequisite for the training of professional skills of the future specialist.
- **Suggestions for organizing the individual work** by carrying out a project in a group including: the expected product, implementation strategies, evaluation criteria and the deadline;
- **Selective bibliography** includes the sources necessary for the student to acquire the subject material (normative acts, application and interpretation of legal norms, court decisions on distinct cases, monographs, textbooks, scientific articles, etc.). It is absolutely necessary that the recommended bibliography also include the course holder's papers;
- **Evaluating the discipline**. According to the structure of the curriculum, the way of assessing the discipline is also reflected. A serious argument in this respect is the need to establish a functional connection between all the teaching-learning-evaluation aspects of the didactic process;
- **Suggestions for individual work**. The curriculum of disciplines also determines the topic recommended for independent student work. It includes the methodology with a clear and detailed description of the stages group problem solving (2-5): planning, monitoring, coordinating individual contributions, preparing the report, evaluation. This provision

allows the efficient organization of work and the monitoring of the process of acquiring the entire programme.

The curriculum of the discipline is conceptualized according to the paradigm of focusing on the learner and competence training. Although the curricular objectives of the fundamental and specialty disciplines project the acquisition of knowledge, skills and competences in the field of law, the concept of their echeloning: level of knowledge and understanding, level of application, level of integration (with emphasis on the training of decision-making skills and competencies, assessment, design, problem solving), also fosters the training of transversal competences.

The curriculum of disciplines is based on a curriculum approach that projects an education focused on achieving the learning outcomes. The learning outcomes are considered the key elements of the curriculum. These are deduced from the competencies to be formed. As the training of competences is a long-lasting process and their ownership is a result of the effort made by various general culture and specialty disciplines, the learning outcomes are designed and evaluated through general curricular objectives, which in turn are materialized by reference objectives. Their design according to three levels of complexity: knowledge and understanding, application and integration, solving provides a methodological tool for competences training. The contents of the discipline are selected and taught in such a way as to contribute to the achievement of the objectives.

The contents are constantly renewed depending on the legislative changes, by the appearance of the new scientific papers in the field in general and the appearance of the new works of the course owner. More and more attention is paid to the didactic strategies aimed at active student learning. Interactive strategies are determined by curricular objectives that require action to apply knowledge and integrate it in order to be able to make value judgments, decision-making, and problem solving. This is done by applying different interractive, active-participatory teaching methods by the teachers. In disciplines with practical applicability, it is recommended the use of the problem-based learning method, which focuses on operational knowledge, on learning by action, brings students into immediate contact with situations in the professional activity.

An impressive number of hours (1 hour of direct contact - 1 hour of individual activity, 1 hour of direct contact - 2 hours of individual activity) are allocated to the individual work of the student. Individual work is guided by the teacher, who, together with the student, chooses the form of accomplishing the individual work, determines the tasks to be performed and specifies the terms of realization, taking into account the time allocated for individual work. The forms of realization of the individual work are also different and reflect the specifics of the discipline, e.g. the portfolio, the case study, the group problem solving in the legal field, the generalization of the statistical data, the analysis of the activity reports of the Court of Accounts, NBM, etc.

The application / implementation of the curriculum is ensured by the methodology of: designing the professional training process (the design reflected in the curriculum expresses the curricular approach oriented towards competence training and focused on the achievement of the objectives); carrying out the professional training process (monitored by the Quality Assurance Committee within the faculty, the Quality Assurance Council of the SUM by student questioning, attending classroom hours, analyzing / discussing public lectures); evaluating the professional training process (application of the assessment methodology based on tasks with varying levels of complexity, reflecting curricular objectives) (annex model of evaluation test).

The curriculum of the study disciplines is updated annually according to the changes in the educational plan, the changes in the legislation and science, the new achievements in the field of didactic strategies.

The content of the programmes is modernized by taking into account the latest results of the scientific investigations as well as those presented in thespecialty literature.

The annual review of cognitive and professional relevance in terms of practical outcomes aims at adjusting them to the competences trained in the discipline.

The curriculum of study disciplines is reflected in the discipline sheets, which are also updated annually.

The concept of specialization in the proposed educational plan is unusual in relation to the specializations existing in other faculties of law, from two points of view: introducing into the educational plan a model of work with projects in a group of students, which will represent the cumulative result of the activities of in several courses, being an interdisciplinary product; on the other hand, this study programme seeks to correlate theory with practice, implements a new co-teaching system, provides guidance to the group of students to solve the problem by the responsible professor and a practitioner in the field (who will assist in assessing group work as an external evaluator) in order to modernize education in the field of law on the basis of Western university experiences.

7 THE WAY TO GO

7.1 INTRODUCTION

Educational institutions in both countries have an institutional development strategy that incorporates curriculum strategy with a focus on student-centered learning (problem-based learning, research-based learning). When creating the study programme, an important role is played by the rate of employability of graduates, the internationalization of studies.

When developing study programmes, it is important to focus on the competences, practical skills that the student will need in his / her later work. Thus, courses are not aimed at familiarizing students with the existing theory only but contain elements that are focused on learning the skills necessary for professional activity. Thus, in the UK at the Faculty of Law, there is a course covering the competences of a legal adviser, which includes: negotiating, interviewing the client, writing documents, etc.

Changing teaching staff' attitudes towards the educational process, as well as the more active involvement of universities in building the professional career of graduates, will encourage the introduction of active learning in the universities of the Republic of Moldova as well.

The policy of both universities offers the opportunity for students to become aware of the future profession prior to obtaining the diploma, either through an annual internship (organized and conducted in the study year 3) - in the UK or through close collaboration with prospective employers - in Denmark. In the UK, many study programmes provide for a study period abroad instead of an internship, in order to gain and accumulate knowledge at international level and to successfully develop various forms of collaboration.

Encouraging an active learning model at the Universities of Denmark and the UK helps to involve students more actively in the educational process and facilitates the improvement of both knowledge and skills.

7.2 FIT-FOR-PURPOSE

With the implementation of the PBL model, there is a need to develop some future recommendations on how to implement PBL in the pilot project. These recommendations are based on comparative aspects identified during the visits.

Both universities are autonomous in the elaboration and modification of the study programme, autonomy being the main motivation of the few higher education institutions to implement a training plan perfectly adapted to the needs of the labor market. ***We consider it appropriate for the study programme to reflect the institutional strategy, which is based on the development of the model of student-centered learning and the implementation of the model in developing the curriculum in accordance with modern concepts and international training requirements.***

At the university level in both countries there is a well-established system to ensure and maintain the quality of the study process, the appropriate methodology is developed. The PBL principles are part of the quality assurance system within the university. ***We consider that it is***

opportune for the Republic of Moldova to involve the specialists in pedagogy and to develop the specific methodology for the training in the legal field.

At Aalborg University there is the „PBL Academy" which is responsible for the development and implementation of the PBL model at the university level. This body has the responsibility to coordinate and cooperate with schools and study boards to ensure the use of the PBL model at all levels. ***We propose that a subdivision with responsibilities for research, development and PBL model promotion be set up within the Continuing Training Center of the SUM. Training staff in the field of IT and endowing study facilities with necessary equipment.***

To improve the learning and teaching strategy of the PBL model, they work on developing and improving study programmes at the level of schools and study boards, each board has a counseling committee to develop student-centered learning and teaching. ***We propose that within each department of the Faculty of Law the research group for the development and improvement of PBL-based teaching should be created, which will investigate the specificity of the PBL application process, taking into account the particularities of the disciplines.***

At the faculty level, meetings are organized where examples of good practice and achievements obtained in student-centered teaching and learning are disseminated. This information is distributed through Moodle for internal users and is made public on the university's website at faculty level. ***We propose that such an experience be taken over in the SUM as well by developing the ICT infrastructure.***

At both universities an important role in maintaining quality lies with the Professional Associations. Often, practitioners, potential employers and even students or graduates are involved in formulating problems. This consultation contributes to the formulation of complex and real problems, but they are also interesting for the students' learning process. The implementation of PBL involves integrating transferable skills identified together with employers in the curriculum, as well as developing problems based on the experiences of potential employers' practice. ***We propose the introduction of the requirement for the approval of the study programme in Law with the mandatory endorsement of professional associations (Union of Legal Advisers, Association of Judges, Union of Lawyers, etc.);***

In Aalborg, students are taught an intitiation course in PBL. Students are actively involved in designing the study programme through systematic assessment and participation in the study boards. ***It would be appropriate to take over this experience.***

In both universities, the students' assessment is conducted in written or oral form, clear criteria are provided for the award of grades/marks for both the written report and the oral evaluation. The external examiner's involvement in oral evaluation and individual assessment is practiced, even within the group project. Starting from the general PBL methodology of Aalborg University, which includes **„small team of students - teacher coordinator – practitioner"**, ***we propose for the Faculty of Law, the involvement of practitioners in the evaluation of group work as an external evaluator.***

The university monitors graduate employment. Former graduates are invited to collaborate with the university and accept projects in the company they are employed. They may be invited as external examiners, as part-time teachers or as a invited professor to provide counseling. ***It would***

be appropriate to take over this experience, which will ensure the incorporation of innovations in the learning process and internationalization.

The share of this teaching workload is adequately reflected in the way the work is paid, so that the teacher offers sufficient attention to guiding group work, meetings with the group, and appropriate assessment. ***Considering the workload and for the motivation of teachers, we consider it necessary to review the remuneration of their work by increasing the number of hours allocated to group work guidance and student assessment.***

Students have free access to the study blocks and libraries, 24/24 free access to printing facilities by applying the electronic card. Practical work on projects (discussions, sketches, project conception) takes place in places arranged throughout the department (halls, corridors, etc.). ***It would be appropriate to take over this experience.***

7.3 CONTENT CHANGE

The introduction of the PBL model at the Faculty of Law by incorporating the problem-based teaching method discussed in the curriculum of the disciplines with practical applicability will be achieved step by step. The curriculum of the disciplines are to be reviewed and adapted to the PBL concept to streamline this process as follows:

Short term:

- Developing a very detailed methodological guideline on the implementation of PBL,
- Ensuring at the department level the annual monitoring process and periodic review of PBL implementation in the educational process,
- All departments shall develop and promote policies for collecting feedback from students in the evaluation process. The department's policies on evaluation feedback should be based on pedagogical reasonings relevant to the disciplines and should be approved by the quality committee,
- Ensuring the extensive use of information technologies to enhance traditional learning combined with a high degree of application of the PBL method,
- Broad use of Moodle platform, social networking and Skype in particular in organizing group work, offering group study rooms at student choice, free WiFi connection within the institution, 24/24 access to the university library,
- More active involvement of students in managing the educational process,
- The curriculum developed for the discipline with PBL incorporation will be based on project activity as a central and binding element and will contain an exhaustive description of the educational objectives including the competences and aptitudes obtained;
- In the curriculum of the disciplines with PBL application, the methodology with a clear and detailed description of the stages of the problem solving in the group (2-5) will be included: planning, which takes place in the following phases: selection of the group members and distribution of tasks: monitoring of the group activity, carried out in the following phases: coordination of individual contributions; discussions, debates and negotiations; preparation of the report: evaluation, carried out in two phases: peer evaluation and the fulfillment of tasks.

- It is recommended, in the evaluation process, that students - members of the design teams – are offered the possibility to appreciate with grades / marks the team colleagues, depending on the contribution they brought in the work process on the project,
- It is recommended to diversify the current assessment forms during the semester,
- Introducing the discipline regarding the training of legal skills will be opportune.

Long term:

- We believe that in the SUM it is necessary to develop an educational plan taking into account the professional training objectives, reducing the number of disciplines and eliminating the general education ones, because students from the faculty of law study exactly what is needed in the practical activity, taking into account the specificity of the national jurisprudence,
- The new study programme should be based on competence, focused on employability (through consultation with employers, professional associations), with emphasis on learning innovations (research-based learning, close links with potential employers, internationalization). It is recommended to sign collaboration agreements between the Faculty of Law and the professional associations with clear provisions on the approval of the study programme and the participation in the external evaluation of the group work,
- We consider that the structure of the semester of study in the new educational plan is oriented towards the project theme. The number of theoretical disciplines to be reduced, to be planned in the form of modules and largely oriented towards the theme of the project. The theoretical hours should not overlap with the hours planned for the realization of the project, which will be interdisciplinary. In this way, the ECTS credits granted to the realization of projects per year at the specialty will be increased (10-15 credits per semester).
- Creating a system for collecting feedback from students and graduates on the quality of the study programme.
- For the implementation of the aforementioned proposals it is necessary to amend some normative acts (eg: Framework plan for study programmes).

	Activity on PBL implementation	**Administration level**	**Deadline**
I STAGE	**Teacher training on the application of the PBL method**	**Team established for the development of the study programme**	**February 2017**
	Elaborating the curriculum for teacher training in problem-based learning and its placement on Moodle	**The team for the psycho-pedagogical module**	**March 2017**

	Incorporating the PBL teaching method into the curricula of disciplines with practical applicability selected for the pilot project	**Team established for the development of the study programme**	**April 2017**
	Training teachers and students on the application of the PBL method	**Team established for the development of the study programme and external experts**	**May 2017**
	Endowment of study facilities with equipment for the extensive use of information technologies	**University Administration**	**August 2017**
II STAGE	**Training students who will participate in the pilot project on the application of the PBL method**	**Team established for the development of the study programme**	**September 2017**
	Applying the PBL method in training students in English-teaching groups	**Team established for the development of the study programme**	**September - December 2017**
	Developping a Methodological Guideline on PBL implementation	**Team established for the development of the study programme and the team for the psycho-pedagogical module**	**December 2017**
	Training teachers and students on the application of the PBL method according to the Methodological Guideline	**Team established for the development of the study programme and the team for the psycho-pedagogical module**	**January 2018**

	Applying the PBL method to disciplines with practical applicability in the training of students in all groups	**Teachers from the Faculty of Law**	**February 2018**
III STAGE	**Creating the research group for the development and improvement of PBL-based teaching that will investigate the specificity of the PBL application process, taking into account the particularities of the disciplines**	**Departments at the Faculty of Law**	
	Modification of the Framework Plan for study programmes and the elimination of general education disciplines		
	Developing a new educational plan taking into account the reduction in the number of disciplines, the new educational plan will be based on competence, focused on employability (through consultation of employers, professional associations).	**Administration of the Faculty of Law**	
	Approval of the study programme in Law with the compulsory endorsement of professional associations (Union of Legal Advisers, Association of	**Administration of the Faculty of Law**	

	Judges, Union of Lawyers, etc.)		
	The number of theoretical disciplines will be reduced, will be planned in the form of modules and largely oriented towards the project theme. The theoretical hours do not have to overlap with the hours planned for the project, which will be interdisciplinary. In this way, the ECTS credits granted to the realization of projects per year at the specialty will be increased (10-15 credits per semester).	**Administration of the Faculty of Law**	
	Creating a system for collecting feedback from students and graduates on the quality of the study programme	**Administration of the Faculty of Law**	

8. CONCLUSIONS

Problem-based learning (PBL) is not just a method or a mere theory of teaching, but a new philosophy, a rethinking of the whole process of learning and teaching, of the relationship between teacher and student. The PBL model in its classical form has been applied over several decades at Aalborg University, but also at other European universities, demonstrating its efficiency, largely due to the high degree of employability of graduates. Today the PBL model is internationally recognized, being of a particular interest for universities, researchers and students in many countries.

In the PBL model the problem is the starting point that directs the entire study process. The problem may be both theoretical and practical, but it must be formulated in such a way that it can be analyzed and solved, sometimes even from an interdisciplinary point of view. With reference to the Law specialty, we mention that most of the teachers are currently those who formulate problems or research subjects, sometimes even presenting some solutions from which students have to choose the right option. We believe that it is necessary to provide students with greater freedom in this respect, giving them the right to formulate some authentic, current problems from their point of view.

The analysis of the SUM institutional framework and the study programme at the faculty of law of the SUM allowed us to make the following conclusions:

- the study programme at the SUM, the "Law" specialty does not fully reflect the current needs of professionalization, there is no focus on interdisciplinary deepening, there are additional disciplines that burden students with unnecessary information;
- most teachers use traditional teaching methods, focusing on the transfer of knowledge, but not on the active involvement of students in the process of knowledge accumulation and the development of new skills in response to new modern knowledge and techniques that require solving problems involving many factors that interact;
- after graduating from university, students have little practical skills, are unable to solve problems, these acquired skills and abilities are not enough to enable them to find a job on the labor market.

Following the comparative analysis of the educational plans of AAU and UoG universities with the current educational plan of the SUM's Faculty of Law, we have appreciated the structure of the PBL learning process as being highly effective, of great prospect of application in the education in the Republic of Moldova.

The problems we face are related not only to the legislative framework but also to the economic situation in the Republic of Moldova, which can not be compared with that in Denmark or the UK, and where it is weakly developed the practice of working with potential employers, their impossibility to offer places for the conduct of internships for a required number of students, the technical-material base of the university which does not provide a high level of training and research.

Closer collaboration with employers would have a positive impact not only on the process of developing the study programme or the curriculum of the disciplines, but would also increase the chances of employment of graduates of the Faculty of law.

The necessary changes regarding the application of PBL would make the contents of the disciplines more interactive and raise the responsibility of the students for the training in the field, would contribute to develop the students' skills of critical analysis and synthesis of information, abstract thinking, evaluation of competitive argumentation and motivated decision making in solving problems. All these skills are essential to the field of law.

The curricula of the disciplines will specify the learning-teaching method as well as how to evaluate the projects solved in the group.

Students will benefit from this blend of learning, research and partnerships with external organizations, which will ultimately ensure that study programmes are relevant and up-to-date.

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Annex 1. Data collection template

Observation grids

Grid 1. System level

Criterion	Description	Source - Normative acts, regulations, guidelines.
Criterion 1: Accreditation of study programmes		
1.1 National external accreditation body		
1.2.Accreditation procedure: methodology and evaluation criteria		
1.3. Relations of the accreditation body with the Ministry of Education		
Criterion 2: Quality Assurance System		
2.1. The existence of a national quality assurance system (QA)		
2.2. The national QA body		
2.3. The relationship of the QA body with universities		
2.4. External quality evaluation procedure: levels, criteria.		
Criterion 3. Programmes with double degrees and recognition of professional experience.		

Grid 2. University level

Criterion	Description	Source - Normative acts, regulations, guidelines.
Criterion 1: The governing bodies of the university and the university management bodies		
1.1. Structure		
1.2. Duties		
1.3. The election procedure		
1.4. The governing body in charge of study programmes, teaching-learning and evaluation processes		
Criterion 2: The organizational structure of the university		

Criterion 3: Objectives of student-centered teaching and learning strategy (separate or embedded in the institutional strategy)		
Criterion 4: The key structure responsible for organizing the student-centered teaching-learning process		
4.1. Duties and subordination		
4.2. Structura /Componenţa		
4.3. Documents issued		
4.4. Relationships with university's academic structures (faculties, departments, etc.)		
Criterion 5: University Quality Assurance System (QA)		
5.1. Duties		
5.2. Structure		
Criterion 6: Introducing Bachelor degree programmes		
6.1. Structures empowered to initiate, develop and approve a study programme		
6.2. Requirements for the dossier content for new study programmes		
6.3. Body approving the dossier		
Criterion 7. Methods of learning-teaching and evaluation used at university (differences between approaches at different faculties / fields).		
Criterion 8. The structure responsible for cycle II / cycle III		
1.1. Duties		
1.2. Relationship with other university structures responsible for approving the curriculum.		
Criterion 9. Documents on the policies and content of the curriculum		
9.1. STUDY PROGRAMME FORM (CYCLES I AND II)		
9.2. Examination policies and procedures form		

9.3. *Semester description* form (by programme)		
9.4. *Module description* form		
9.5. Grading scale		
Criterion 10. Student involvement in university governance and management.		
Criterion 11. Student-centered teaching and learning approach at university level.		
11.1. Mission / Strategy of the university		

Grid 3. Level of faculty / department

Criterion	Description	Source - Normative acts, regulations, guidelines.
Criterion 1. The relationship between higher management (university level) and faculty management and / or the department with reference to student-centered teaching and learning.		

Grid 4. Body / structure level responsible for the development of the study programme

Criterion	Description	Source - Normative acts, regulations, guidelines.
Criterion 1. **Structure of the body responsible for drawing up educational plans and curricula**		
Criterion 2. **The relationship of this body with the faculty, department and other structures within the faculty / department.**		
Criterion 3. **Creation of inter- and multidisciplinary programmes.**		
Criterion 4. **The process of developing and approving new study programmes.**		
Criterion 5. **The process of approving a new module in an existing study programme.**		
Criterion 6. **Evaluation practices / methods used.**		

Criterion 7. **Involving students in the development of study programmes.**		
Criterion 8. Management of study programmes		
8.1. Involvement of academic staff in the organization and coordination of a study programme		
8.2. The way this process is formalized		
Criterion 9. Review of a study programme		
9.1. Annual monitoring procedure and periodic review of the programme		
9.2. Performance indicators applied 9.3. Students feedback: procedure and impact		

Grid 5. Integration of disadvantaged groups of students:

Criterion	Description	Source - Normative acts, regulations, guidelines.
Criterion 1. Structure responsible for students with disabilities.		
1.1. Responsibilities		
1.2. Resources		
Criterion 2. Measures / arrangements for students with disabilities.		
Criterion 3. Approaches for socially disadvantaged students.		
Criterion 4. University's capacity with regard to teaching methods for students from disadvantaged backgrounds.		
Criterion 5. Academic support available to students with learning disabilities.		

Grid 6. Infrastructure

Criterion	Description	Source - Normative acts, regulations, guidelines.

Grid 7. Level of study programme

Criterion	Description	Source - Normative acts, regulations, guidelines.
Criterion1. The level of reflection in the institutional strategy of the approach to the learning-teaching process.		
Criterion 2. Focus of the study programme.		
Criterion 3. The structure of the educational plan of the study programme		
3.1. Total number of hours per semester		
3.2. Modules		
3.3. Students' assessment		
3.4. Evaluation of academic staff		
3.5. Progress of learning		
Criterion 4. Type of accreditation: academic / regulatory or professional		
Criterion 5. **The level of use of IT, e-learning and / or blended learning platforms**		
Criterion 6. **Elaborating, improving / modernizing and organizing / managing the study programme**		
6.1. Procedure and responsible structure		
6.2. Involvement of students		
6.3. Involvement of employers and other stakeholders (e.g. graduates)		
Criterion 7. **Accompanying / support documents / materials of the programme and their public availability**		
Criterion 8. Management of the study programme		
8.1. Regulations on the study programme		
8.2. The structure that monitors the implementation of the regulation		
8.3. Rules to determine the workload of academic staff (for different types of		

activities: teaching, supervision, evaluation)		
8.4. Student workload: calculation procedure and impact on curriculum development		
8.5. Outcomes of the study programme and their evaluation		
Criterion 9. Students' assessment		
9.1. Regulations / guidelines available		
9.2. Forms of assessment		
9.3. Measures to avoid cheating and plagiarism		
9.4. Provisions for appeals		
9.5. Involvement of external examiners		
9.6. Grading system, study credits, and recognition of previous study results.		
Criterion 10. **Incorporating into the programme and facilitating academic mobility**		
Criterion 11. **Student evaluation of academic staff and management of feedback results.**		
Criterion 12. **Academic requirements for enrollment in the study programme**		
Criterion 13. **Monitoring the employability of programme graduates.**		

Grid 8. Pedagogical training level

Criterion	Description	Source - Normative acts, regulations, guidelines.
Criterion 1. **The level of reflection in the institutional strategy of** **The approach to the learning-teaching process.**		

Annex 2. Table of data reporting on the State University of Moldova

Table 2: Data reporting table

Formulation of the question, the problem	The material consulted	Findings	Reflections
1. System level Criterion 1. Accreditation of study programmes	Education Code, no. 152 07.17.2014 Government Decision no. 616 of 18.05.2016 for the approval of the Methodology of external quality evaluation for provisional authorization and accreditation of study programmes and vocational education and training, higher education and continuous training institutions.	The national accreditation body is the National Agency for Quality Assurance in Professional Education	External accreditation is a difficult, but necessary process, given that several higher education institutions with serious deficiencies in the educational process have been created in Moldova
Criterion 2. Quality Assurance System	Education Code, no. 152 07.17.2014 Government Decision no. 616 of 18.05.2016	Quality management in higher education is assured: a) at national level - by the Ministry of Education and by the National Agency for Quality Assurance in Professional Education; b) at institutional level - internal quality assurance structures.	The existence of the Agency is a determining factor in ensuring an efficient and qualitative educational process.
L2: University level	SUM Charter, Approved at Senate Meeting no.7 of March 31, 2015; Senate Regulation, approved at the session of the Senate of the State University of Moldova from 6.10.2015, minutes no. 2	The system of the governing bodies of the State University of Moldova consists of the Senate, the Council for Institutional and Strategic Development, the Scientific Council, the Administration Council, the Rector, the Faculty Council, the Senate Office, and the Faculty Office.	The SUM's governing bodies fully reflect the legal requirements on its organization and operation
L3: Level of faculty / department	SUM Charter Framework regulation on the Organization and Operation of the Governing Bodies of the Higher Education Institutions of the Republic of Moldova,	The Faculty Council determines the Faculty's development strategy correlated with the University's strategic plan. The structure of the Faculty is approved by decision of the SUM Senate.	The Faculty of Law and the departments within it do not have organizational and financial autonomy. Student-centered teaching and learning can be implemented more

	approved by Order of the Ministry of Education no. 10 of January 14, 2015 Regulation of the SUM faculty, approved by the SUM Senate on 26.02.2013 Regulation of the SUM Academic Department, approved at the session of the SUM Senate, of 26 February 2013, Minutes no. 6	The faculty is led by the faculty council. Students are represented in the Faculty Council in the proportion of 1/4 of the total number of members. Employers are not represented in the faculty council. The operative management of the faculty is carried out by the Dean and the faculty office. The faculty of law consists of 5 departments, each headed by a head of department.	quickly if active support is provided by university management bodies, including by the approval of regulatory documents, such as the methodological guideline on the application of the PBL model. It is necessary to include employers as members of the faculty council.
L4: Study board level	SUM Charter	After the endorsement in the faculty council, the study programme documents are submitted for approval to the university senate. The final decision on the initiation of the study programmes is approved by the Council for Institutional and Strategic Development, in accordance with the legal provisions.	
L5: Integration of disadvantaged students	Law no.60 of 30.03.2012 on the social inclusion of persons with disabilities	Within the SUM, there is the Training center for visually impaired students with the use of special software. The SUM's second block of study where the headquarters of the faculty of law is located has recently underwent capital repairs, creating conditions for students with disabilities, including a special elevator. At the level of organizing the teaching-learning process there are individual study programmes for students with disabilities.	The university has enough mechanisms to integrate disadvantaged students
L6: Infrastructure		The lectures, the seminars and the other activities related to the educational processwithin the faculty of lawg take place primarily in Block 2 of the campus. Also in Block 2 there are two conference rooms, the Anglofon Hall, the hall the	Block 2, in which the Faculty of Law is based, currently does not have sufficient IT resources to provide student-centered learning.

		francophone group, the court processes simulation room, etc.	
L7: Study programme level	The framework plan for higher education (cycle I – Bachelor's degree studies, cycle II – Master's degree studies, integrated studies, cycle III - doctorate), approved by Order of the ME no. 1045 of 29 October 2015	The heads of departments have the decisive role in the elaboration of the study programme, who come with proposals regarding the disciplines to be included in the programme. The programme is approved by the faculty council, and later by the Senate. The structure of the programme is subject to strict rigors as determined by the Framework Plan.	The employer's opinion is not taken into account when developing the study programme. In addition, students should be more actively involved in developing new programmes or changing existing ones. The university must have greater independence in terms of developing new study programmes.
L8: Pedagogical training	Education Code, no. 152 07.17.2014 SUM Charter	The University promotes and manages the professional career of each teacher by ensuring the continuous training of the teaching staff in accordance with the Strategic Development Plan of the university, faculty and department. The Continuing Training Center plays an important role in the training of teaching staff within the SUM.	Pedagogical training is welcome not only for young specialists but also for experienced teachers. It is necessary to organize periodically trainings, workshops for the exchange of experience, knowledge, new teaching-learning methods.

Annex 3. Comparative analysis of institutional framework and study programmes at the State University of Moldova, AAU University of Denmark and UoG University in the UK

Criteria, properties, indicators	SUM	AAU	UoG
1. SYSTEM LEVEL **Criterion 1. Accreditation of study programmes**	The national accreditation body is the National Agency for Quality Assurance in Professional Education	The accreditation system in Denmark consists of the Accreditation Council and the Danish Accreditation Institute	Accreditation of study programmes is done with the involvement of three organizations: the Privy Committee, the Agency for Quality Assurance in Higher Education, the Council for Financing Higher Education in England
Criterion 2: Quality Assurance System	Quality management in the higher education of the Republic of Moldova is assured: a) at national level - by the Ministry of Education and by the National Agency for Quality Assurance in Professional Education; b) at institutional level - internal quality assurance structures.	In the Danish education system there is no central / national quality assurance body. The quality of the study programmes is subject to external evaluation under their accreditation procedure.	The body that monitors the quality of studies in the UK is called the Agency for Quality Assurance in Higher Education
2. UNIVERSITY LEVEL University governing and management bodies	The system of governing bodies of the SUM consists of the Senate, the Council for Institutional and Strategic Development, the Scientific Council, the Administration Council, the Rector, the Faculty Council, the Senate Office, and the Office of the Faculty.	The council/board is the governing body of the university The Rector	Governing bodies: Council/Board, Rector, Vice-Rector, Academic Committee, Secretary, Student Organizations.
3. Level of faculty, department Criterion: Structure of the faculty / department	The Faculty Council - the decision-making and deliberative body	The Rector determines the internal structure of the university, within the	The university includes faculties and 10 schools

	of the faculty within the SUM. Operative management of the faculty - Dean and Faculty Office. The faculty of law has 5 departments.	limits set by the university council/board. Within each faculty, there are departments, doctoral schools, study councils/boards (and, in some universities, schools).	
4. Institution / structure level responsible for the development of the study programme	After the endorsement in the faculty council, the study programme documents are submitted for approval to the university senate. The final decision on the initiation of the study programmes is approved by the Council for Institutional and Strategic Development, in accordance with the legal provisions.	The Study Board/Council includes an equal number of teachers and students' representatives. The main responsibility of the study board/council is to develop the educational plan, the study guideline, assure the quality of the programme, and also ensure the organization, performance and delivery of the teaching-learning process.	The faculty council is responsible for the academic programmes of the faculty, including academic and performance standards of the programmes that the faculty has to implement in line with the university teaching and learning strategy.
Criterion: Objectives of the Student-centered teaching and learning strategy	The Strategic Plan of the SUM for the years 2016-2020 has as a strategic objective the development and enhancement of the quality of the educational offer.	Problem-based learning (PBL) / project is one of the strategic directions of the Aalborg University's Strategy for 2016-2020	The student-centered teaching-learning process is assured according to the specifics of the faculty
Criterion: Key structure responsible for organizing the process of student-centered Teaching and learning	The governing body responsible for study programmes, teaching-learning and evaluation processes is the Quality Management Department: curricular development and evaluation.	The inter-university structure responsible for the implementation, promotion and development of PBL within the AAU is the PBL Academy.	
Criterion: Involvement of students in university governance and management	25% of the Faculty Council are students. The Senate of the University consists of .... students	Student representatives are members of all management bodies and university advisory bodies.	At the University of Gloucestershire Student organizations must be created and administered by students on the basis

			of a statute approved by the Council.
5. Integration of disadvantaged groups of students	Within the SUM, there is the Training center for visually impaired students with the use of special software. The SUM's second block of study where the headquarters of the faculty of law is located has recently underwent capital repairs, creating conditions for students with disabilities, including a special elevator. At the level of organizing the teaching-learning process there are individual study programmes for students with disabilities.	There are access means in the University, one-level study blocks, access ways for the visually impaired.	The university is equipped with special slopes/platforms for students traveling with wheelchairs in the campus and within the blocks of study. Financial facilities are provided by applying the Scholarship for Disabled Students.
6. Infrastructure	The University has rooms for theoretical, practical lessons, libraries, conference rooms, etc. Block 2 is not equipped with the technical means to organize the interactive teaching-learning process. There are not enough small rooms in which small groups of students can work.	The University purchases and allocates resources to support and facilitate application of problem-based learning / project. This involves: providing space for group work, meetings with the project supervisor, classes of different sizes and equipment.	The technical endowment of the institution facilitates the active learning process, the Moodle platform is widely used.
7. STUDY PROGRAMME LEVEL	The study programme in law is developed according to a model set by the Framework Plan and contains a large number of disciplines. The determining role in the proposal of disciplines for the study programme lies with	The study programme focuses on employability. It is based on PBL (50% of disciplines). The AAU has independence in developing the study programme.	The study programme contains a small number of diciplines, strictly needed by the future specialist. Particular attention is drawn to the development of practical skills.

	the heads of departments, but not the students or employers		
8. PEDAGOGICAL TRAINING LEVEL	Within the SUM there is the Continuing Training Center, whose work is mostly focused on the training of young specialists. The psycho-pedagogical module is mandatory for all novice lecturers	Continuous training is one of the keys to the success of the AAU's PBL model	Teachers permanently improve their teaching skills. Particular attention is drawn to interactive teaching methods with the use of modern technologies.

Annex 4. Common patterns and variations

	Common patterns	Variations
1. System level Criterion 1. Accreditation of study programmes	The accreditation process, the responsible institutions are clearly specified in the normative documents	Republic of Moldova: ANACIP, accreditation every 5 years Denmark: The accreditation system consists of the Accreditation Board and the Danish Accreditation Institute United Kingdom: The accreditation of study programmes is done with the involvement of three organizations: the Privy Committee, the Quality Assurance Agency in Higher Education, the Higher Education Funding Council in England
Criterion 2. Quality assurance system	Systems in all three states are meant to improve the quality of programmes in the higher education sector and to help create a more efficient educational market.	Republic of Moldova: Quality management in higher education is assured: a) at national level - by the Ministry of Education and by the National Agency for Quality Assurance in Professional Education; b) at institutional level - internal quality assurance structures. Denmark: There is no central / national quality assurance body in the Danish education system. The Danish Accreditation institution also aims to ensure quality and relevance in the field of higher education. United Kingdom: Agency for Quality Assurance in Higher Education
2. University level	The existence of the governing body and the university management body	Republic of Moldova: Senate, Rector, etc. Denmark: University Board/Council and Rector PBL Academy United Kingdom: Governing Bodies: Council, Vice-Rector, Academic Committee, Secretary, Student Organizations. The existence of a university-level service ”Help Zone” that has the competence to assist, help, guide

		students throughout their studies, facilitates the educational process.
3. Level of faculty, department	Within each faculty of the universities concerned, there are departments, doctoral schools, study councils. Each faculty is led by the dean.	Republic of Moldova: The faculty of law has 5 departments, each of which is made up of a large number of teachers (for example, Department of Public Law: 51 teachers). Denmark: The faculty of law has a fairly low number of teachers. But each teacher is assisted in exercising his/her duties by the so-called assistants. United Kingdom: The University of Gloucestershire has three faculties: (1) Faculty of Applied Science; (2) Faculty of Business, Education and Professional Studies and (3) Faculty of Media, Arts and Technologies.
4. Level of body responsible for study programmes	In all three universities the elaboration of the study programmes is done with the involvement of the internal structures of the universities	The Quality Management Department of the SUM is responsible for monitoring the development of study plans. The Faculty Council is responsible for the academic programmes of the Faculty at AAU and UoG Universities. In both universities within the faculty council an impressive number of students is included who are actively involved in the management of the faculty, the elaboration of the study programmes. Also, future employers who are better acquainted with the needs of the labor market are also involved in the development of study programmes.
5. Integration of disadvantaged groups of students	Universities offer very good conditions for the integration of disadvantaged students (special stairs, etc.)	
6. Infrastructure	All universities have halls for theoretical, practical lessons, libraries, laboratories, etc.	The SUM's technical equipment needs to be completed in order to effectively ensure the PBL. AAU and UoG Universities are equipped with advanced technology, which allows effective application of the PBL method in the teaching-

		learning process. There are many rooms within the AAU and UoG universities that offer students the possibility to work in small groups.
7. Level of study programme Key criteria: Structure of the study programme, number of credits, basic skills	The study programmes at all universities are elaborated according to procedures determined by the legal framework, but also by the institutional acts.	At SUM, Bachelor's degree studies last for 4 years, 8 semesters. The programme contains an impressive number of disciplines. At AAU and UoG universities, the Bachelor's degree studies last for 3 years, 6 semesters in total. Basic skills offered by study programmes: AAU and UoG a) to identify, analyze and solve problems; b) extensive academic knowledge, theoretical, practical and methodological abilities At both universities, the programmes contain a small number of disciplines. Denmark • One semester = 30 ECTS • Total: 30 ECTSX6 = 180 ECTS United Kingdom • One semester = 60 CATS (each level = 120 CATS) • Total: 60 CATSx6 = 360 CATS The PBL method is found in a more prominent form in the study programme of the university in Denmark, which provides for the development of several research projects.
8. Pedagogical training level	The three universities provide for the pedagogical training mechanism for academic staff to enhance the quality of studies	Within the SUM, pedagogical training is mostly oriented towards young specialists. At AAU and UoG universities, teacher training has a continuous and permanent character, starting from the need to apply the advanced teaching-learning methods with the involvement of modern technologies

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Medicine:
Pilot Student-Centred Active-Learning Study Programme

SUMPh „Nicolae Testemițanu"

Work Package 3

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1 INTRODUCTION

In line with the requirements of the project „Introducing Problem Based Learning in Moldova: Toward Enhancing Students' Competitiveness and Employability", funded by the European Commission under the European Programme Erasmus Plus, we present the project's 3rd Work Package for analysis.

Taking into account the purpose of the project aimed at consolidating the institutional capacities of 6 higher education institutions from the Republic of Moldova focused on improving the quality of study programmes and the methodology of teaching-learning, we propose to introduce in the curriculum of SUMPh "Nicolae Testemitanu" the progressive methods of education based on problems and their adjustment to the performance indices towards which our University is oriented.

The basic mission of the State University of Medicine and Pharmacy "Nicolae Testemitanu" is defined by its key role in the process of reforming both the medical higher education and the health system in the country. Aligning to everything modern in university education, developing and deepening research and innovation activities in the field of medicine, rhythmical deployment of clinical work are the three components that determine the current image of the University.

One of the academic principles underlying the training activity in the University is the principle of quality, which provides for the reporting of training activities to national and international standards. These are found in the objectives of the *Development Strategy of SUMPh "Nicolae Testemitanu" for the period 2011-2020*, which provides for the integration of the graduates into the labor market by capitalizing the competences acquired during the study years.

SUMPh "Nicolae Testemitanu" accomplishes its mission based on the University Charter which stipulates the achievement of the following objectives:

a) creating, maintaining and disseminating knowledge at excellence level;
b) training of highly qualified specialists competitive on the national and international labor market;
c) development of scientific research in accordance with national and international standards, including in collaboration with institutions in the country and abroad;
d) ensuring the provision of qualified medical and pharmaceutical services;
e) creating lifelong learning opportunities;
f) preservation, development and promotion of national cultural-historical values in the context of cultural diversity.

Curricular reform requires continuing critical analysis, systematic evaluation, updating and compatibilization of graduate and postgraduate study programmes with the needs of the European and national health system.

Continuous professional training according to European Union standards requires the improvement of the training process, improvement, objectification and transparency of the evaluation system of both the knowledge and the practical skills of students and residents, including under the conditions provided by the University Center for Simulations in Medical Training.

One of the primary objectives of the University is the organization of modern, flexible medical and pharmaceutical higher education in accordance with national and international standards, in line with the requirements of the Bologna Declaration.

The current curricular reform aims at substantially renewing study programmes, capitalizing new educational offers, applying the European transferable academic credit system, implementing modern information technologies, advanced forms and methods of teaching-learning-evaluation.

In order to achieve the objectives of the PBL project in the Republic of Moldova it is necessary to approach the progressive and innovative methods in the training process such as problem-based learning (PBL) and simulations, as well as the re-organization of the study programme.

The students of the SUMPh "Nicolae Testemitanu" meet with PBL elements, even from the first year of studies, and subsequently at all clinical disciplines, so we consider that there is no need for a radical change of the curriculum, but only the adjustment of certain programmes containing several elements of problem-based learning that would facilitate the education process of students in a new and constructive format oriented towards:

a) developing teamwork skills;
b) engaging and encouraging critical thinking and intellectual competiveness;
c) creating the conditions for the development of creativity;
d) exchange of views and analysis of proposals submitted by team members;
e) stimulating decision-making autonomy and procedures to resolve the situation in case of failure;
f) active collaboration of students both at the group level and with the facilitator at all stages of problem solving.

Because the PBL model involves teamwork, there is a need to restructure the educational process and create small groups of students (7-8 people), thus referring to our University's study programme the implementation of the PBL project would be optimal starting with the third year of studies at the Faculty Public Health, which currently has the smallest number of students.

From the literature analyzed we conclude that the PBL model encourages the development of communication skills, critical thinking, competitiveness, presenting opinions and ideas, development of analytical capacities, focusing on solving the problem.

Because problem-based learning is student-centered, it will help change the way the problem is addressed and capitalize all the possibilities and methods to solve the problem, and the student will develop new skills and abilities oriented towards the achievement of the task.

One of the major factors that would allow successful implementation of the project in the medical higher education in the Republic of Moldova is the motivation, encouragement and active involvement of students in the problem-based learning process with the assigning of autonomy and taking responsibility in decision-making, which would ultimately contribute to obtaining the necessary skills for the profession of doctor.

Focusing education on the beneficiary is in accordance with the stipulations of art. 7 of the Education Code of the Republic of Moldova dated 17.07.2014 ([1]published in the Official Gazette of the Republic of Moldova, no. 319-324 of 24.10.2014), which shows that the implementation of the

problem-based education is also a prerogative of the Ministry of Education of the Republic of Moldova.

In spite of the fact that the graduates of SUMPh "Nicolae Testemitanu" have obtained theoretical knowledge and practical skills during their studies at the faculty, which successfully enable them to work in the field of medicine, we believe that the implementation of new methods of education and training of the staff in the Health System of the Republic of Moldova will contribute to increasing the competitiveness of our graduates not only on the domestic market, but also internationally.

As the PBL project involves not only reshuffles at programme level but also adequate logistical support, both academic and administrative staff have been chosen in the working group.

Work team members analyzed the study programmes of the partner universities in the European Union, which were collected during the mobilities at Aalborg University, Denmark, and the University *Peninsula School of Medicine and Dentistry* in Plymouth, UK.

Table 1. Work team - SUMPh "Nicolae Testemitanu"

Members of the working group SUMPh „Nicolae Testemitanu"	Scientific and didactic title, position held
Gavriliuc Mihail	Univ.Prof., Vice-Rector for International Relations, SUMPh „Nicolae Testemitanu"
Vovc Victor	Univ.Prof., Head of Department of Human Physiology and Biophysics, SUMPh „Nicolae Testemitanu"
Cemortan Igor	Associate Professor, Head of Department of Molecular Biology and Human Genetics, vice-dean of the Faculty of Medicine no. 2, SUMPh „Nicolae Testemitanu"
Babuci Angela	Assistant lecturer, Vice-dean of the Faculty of Medicine no. 2, SUMPh „Nicolae Testemitanu"
Mînăscurtă Nicoleta	Methodist, Department of Foreign Relations and European Integration, SUMPh „Nicolae Testemitanu"

Visits to partner universities in the European Union have been informative and very useful. During these visits we had the opportunity to get acquainted with the PBL training methodology, we also initiated the cooperation process of SUMPh "Nicolae Testemitanu" with the partner universities in the EU.

Thanks to the mobility organized within the project we have gained experience with regard to the problem-based learning methodology, we have documented on the organization of the medical training process and we have learned how to elaborate and the stages of the implementation of the study programmes and their integration in universities at different hierarchical levels such as: management at the level of university, faculty, departments and other university subdivisions.

During the mobility period, we participated in daily curricular and extracurricular activities taking place at the universities of Aalborg and Plymouth.

We attended practical workshops, lectures, roundtables organized by host universities and coworked to create a flow of inter-university academic mobility on the training of teaching staff from the State University of Medicine and Pharmacy “Nicolae Testemitanu” in Moldova regarding the methodology of problem-based learning.

We analyzed the study programmes at Aalborg and Plymouth universities and got to the conclusion that they have a well-structured curriculum covering the three core objectives of problem-based learning, namely:

a) exceptional clinical education;
b) high rate of employment;
c) research at international standards.

Undoubtedly, problem-based learning is a progressive method of student-centered education with interdisciplinary integration and analysis of case-problems in teams.

Work Package 3 represents a detailed analysis and structuring of the experience gained during the implementation of the project’s objectives and includes:

a) data and findings described in the reporting reports on mobilities at partner universities in the European Union;
b) the methodology used for data collection and analysis;
c) the analysis of the medical education system of the Republic of Moldova (Bachelor’s degree level);
d) comparative analysis of higher education systems in our country, Denmark and the UK;
e) conclusions on comparative analysis of health education systems;
f) the action plan and the roadmap for the implementation of the pilot module “Neuroscience” in the specialty Public Health in the third year of university studies.

The Faculty of Medicine of the State University of Medicine and Pharmacy (SUMPh) "Nicolae Testemitanu" of the Republic of Moldova is a scientific, curative, and cultural center of graduate, postgraduate, residential and continuing training of physicians/doctors and pharmacists from the Republic of Moldova. SUMPh “Nicolae Testemitanu”, according to the Government Decisions of the Republic of Moldova No. 363 of 25.07.1991 and No. 705 of 18.12.1996, is the successor of the State Medical Institute in Chisinau, founded in 1945.

The University operates on the basis of the Constitution of the Republic of Moldova, the Education Code of the Republic of Moldova of 17.07.2014, the WHO Concept, other legislative and normative acts, including international treaties and pacts to which the Republic of Moldova is a party, such as “The Lima Declaration on Academic Freedom and Autonomy of Institutions of Higher Education” (1988), “The Magna Charta of European Universities” (Bologna, 1988), the Bologna Declaration (1999), etc., as well as the Charter of the State University of Medicine and Pharmacy “Nicolae Testemitanu” from Moldova.

Since 1990, the State Medical Institute in Chisinau is named after Nicolae Testemitanu (1927-1986) – Honored Person, illustrious scholar, talented pedagogue and educator, state man,

experienced public health organizer who contributed substantially to the organization and development of the health care system in our country; was a militant promoter of the national rebirth, sovereignty and independence of the Republic of Moldova.

On July 25, 1991, the State Medical Institute “Nicolae Testemitanu” in Chisinau was reorganized into University. In 1996 the institution was given a new name - State University of Medicine and Pharmacy “Nicolae Testemitanu” of the Republic of Moldova.

We are planning to implement the PBL pilot module “Neuroscience” within the Faculty of Medicine no.1, where the Public Health specialty is provided.

2 ACTION PLAN FOR THE WORK PACKAGE 3

2.1 PURPOSE AND OBJECTIVES

Curricular reform of the study programme at the Faculty of Medicine no. 1, Public Health specialty, and modernization of the higher medical education programme in the Republic of Moldova in accordance with the Bologna Process through the implementation of a pilot module "Neuroscience":

1. Elaboration of a new curriculum for the Faculty of Medicine no. 1 at the Public Health specialization according to the methodology "Problem-based learning and simulation in medicine".
2. Analysis of the analytical programmes of the disciplines to be integrated into the PBL "Neuroscience" interdisciplinary module and elaboration of a new analytical programme according to the PBL curriculum standard in the partner universities of the project.
3. Approval of the "Neuroscience" module at all university-level instances.
4. Identification of facilitators from among the academic staff and their involvement in the implementation of the interdisciplinary PBL "Neuroscience" module.
5. Arrangement of study rooms with equipment necessary for the implementation of the programme.
6. Teaching staff mobility and familiarization with PBL training methods in EU partner universities.
7. Training of the academic staff and programme managers of SUMPh "Nicolae Testemitanu" with regard to PBL methodology by foreign partners.
8. Designing cases for PBL under the guidance of our European Union partners.
9. Implementation of PBL in SUMPh "Nicolae Testemitanu".
10. Mobility of Moldovan students in EU universities.
11. Testing the new study programme:
    a) the results obtained at the examination session;
    b) anonymous questioning of students.
12. Final implementation of the PBL and continuous improvement of the new study programme.
13. Employment rate of graduates trained by using the PBL method and comparative analysis with the employability of graduates trained by using traditional methods.

2.2 ROAD MAP

	2015			2016												2017											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Establishment of the working group																											
Researching good international practices																											
Obtaining approval of derogations submitted to ME																											
Creating the programme structure																											
Dissemination of the new programme																											
Development and implementation of a new programme questionnaire																											
Approval of the new curriculum																											
Implementation of the new programme																											

3 "NEUROSCIENCE" PILOT PROGRAMME FOR THE "PUBLIC HEALTH" SPECIALTY

3.1 INTRODUCTION

The PBL-based "Neuroscience" study programme for the "Public Health" specialization was developed based on the University's previous experience in the field of problem-based learning, with the help of information acquired as a result of the visit to Plymouth University Peninsula School of Medicine and Dentistry (PU PSMD) in UK on the organization and deployment of PBL and the support of colleagues from Aalborg University (AAU), Denmark.

The primary purpose was to compare the organization of education based on PBL at the faculties of medicine, focusing on the specifics of medical education. There are big differences in the organization of higher medical education in the UK compared to the Republic of Moldova, which makes it impossible to copy the format of the study process deployment, which requires adaptation to the realities of our country. At the same time, the goal proposed in various universities using PBL is to focus on the individual activity of students, to plan a larger number of practical hours, compared to theoretical ones, to carry out some projects.

The accumulated data and suggestions have led to the creation of a multidisciplinary pilot programme based on student-centered learning. The pilot programme is a multidisciplinary programme in "Neuroscience" involving the co-operation of several teaching subdivisions. This programme is intended for students from the Faculty of Public Health, 3rd year, 2nd semester. The selection was based on the relatively small number of faculty students, and in the second year, semester II, the students are familiar with most of the preclinical subjects, which makes it possible to strengthen the studied subjects at a higher level.

3.2 PILOT PROGRAMME

The "Neuroscience" multidisciplinary course is based on the discipline of "Neurology" and aims at studying the physiological and pathological changes of the nervous system according to the neural substrate and causative factor, the multilateral examination of the relevant relationships between the structure and the internal organization of the nervous system and the law of syndromology and topic diagnosis.

3.2.1 Learning objectives within the discipline

At the level of knowledge and understanding

- To define the theoretical foundations of contemporary neurology;
- To identify the anatomical-functional features of the nervous system;
- To highlight topographically the place and the weight of different structures, formations and areas of the nervous system in performing the concrete functions and neurological syndromes as a whole;
- To determine the topical diagnosis based on defined clinical syndromes;

- To report about etiopathogenesis, clinical manifestations, diagnosis, principles of treatment and prophylaxis of neurological diseases.

At the application level

- To collect the anamnesis and evaluate the data about the functions of the nervous system;
- To perform the special neurological examination on systems;
- To apply diagnostic methods in neurological diseases;
- To evaluate the results of clinical samples and tests, additional diagnostic investigations to assess the functional status of the nervous system;
- To apply the methods of examining the patient in emergency situations.

At the integration level

- To appreciate the importance of neurology in the context of Medicine and integration with related medical disciplines;
- To appreciate the evolution of physiological processes and the etiology of the pathological processes of the nervous system;
- To supervise pathological processes and to use the methods of investigation, treatment and prophylaxis of nervous system diseases;
- To appreciate the results of diagnostic methods in neurological diseases;
- To make optimal decisions in providing emergency medical aid in critical situations;
- To develop scientific research projects in the field of neurology.

Given the SUMPh's experience in organizing a "Neuroscience" Summer School and the recommendations of the European partners, the team established to develop the pilot study programme based on PBL proposes it to be implemented from February 2018. The experience of implementing this pilot programme will help identify key impediments and to develop a strategy of improvement and adjustment to the new established objectives, which will contribute to the implementation of PBL in other medical disciplines.

Educational policy is a topic of central interest and a basic practice in SUMPh „Nicolae Testemitanu". The mobilization of the university community found the expression in the phenomenon of the Bologna Process, which was introduced in the Republic of Moldova in 2005 through the operation of the amendments and completions to the Law on Education no. 547 of 21.07.1995. The Bologna Reform in the SUMPh „Nicolae Testemitanu" was promoted in particular by the uninterested and devoted contribution of the university managers, who assumed the status of reform experts and promotors, without remuneration and additional expenses from the state budget. So far, it has been possible to change educational plans, to reform the university curricula, to introduce the European Credit Transfer System, to develop and to implement the European Diploma Supplement, to structure the quality management systems of the university processes. One of the main directions of the reforms was the organization of the system of internal and external quality evaluation and monitoring through the implementation of the Quality Management System in the University.

The analysis of the quality of university education in the Republic of Moldova through the provisions of the Bologna Process raised a fundamental question - the absence of the external

evaluation mechanisms of the higher education institutions in parallel with the internal mechanisms of the institutions.

On December 11, 1999, the National Council for Academic Evaluation and Accreditation (CNEAA) was established by Government Decision, besides the Government of the Republic of Moldova. This Council operated the first accreditations, but in 2002 this semi-autonomous institution was liquidated and responsibility for accreditation transferred to the Division of Higher Education Accreditation of the Ministry of Education. Starting with 2008, the Ministry of Education no longer evaluates and accredits higher education institutions and study fields due to the lack of an adequate structure. Consequently, the Republic of Moldova does not have an adequate regulatory base and an institutional system for regulating and monitoring quality in accredited educational institutions, violating the principle of periodic evaluation and accreditation of educational service providers.

SUMPh "Nicolae Testemitanu" was accredited in 2001, according to the Government Decision of the Republic of Moldova no. 574 of 05.07.2001, and in 2007, according to the Decision of the College of the Ministry of Education and Youth no. 8.5.1 of July 19, 2007 (periodic accreditation).

In 2005, the Faculty of Medicine of SUMPh "Nicolae Testemitanu" was evaluated by the CIDMEF external evaluation commission. The purpose of the external evaluation commission's visit was to validate institutional self-analysis and assessments made. This visit helped to promote the motivation of faculty members and the objectivity of self-analysis.

Currently, SUMPh „Nicolae Testemitanu" operates on the basis of accreditation made in 2007 by the Specialized Academic Evaluation and Accreditation Commission of the Accreditation Department of the Ministry of Education and Youth of the Republic of Moldova. The Commission has conducted its work on the basis of: 1) Order of the Minister of Education and Youth of the Republic of Moldova no. 126 of 07 March 2007; 2) Law on Evaluation and Accreditation of Education Institutions of the Republic of Moldova no. 1257-XIII of July 16, 1997; 3) The Regulation on the operation of the Specialized Academic Evaluation and Accreditation Commissions of Higher and Postgraduate Institutions; 4) Set of support materials (Table. The results of the evaluation and appreciation of the activity carried out at the specialties; Questionnaires: 1. The quality of the conditions of professional activity 2. Higher education - access and quality 3. Evaluation of the teacher's dactic-methodical activities (A. Theoretical course quality; Quality of practical activities).

The Standards of the International Standardization Organization (ISO) have been implemented in the health education system, which requires regular re-evaluation of the educational system according to national and international standards.

Following the accession of the Republic of Moldova to the Bologna process, the SUMPh started to develop its own Quality Management System (QMS), which has the role of generating confidence in the University's ability to provide quality services (professional training, training, research, design, consulting, etc.). The quality assurance policy in the SUMPh is developed by the Rector with the participation of the RMC and provides management's commitment to meet the requirements of the beneficiaries, continuously improving the effectiveness of QMS. The internal audit is performed to determine the extent to which the QMS requirements are met; evaluate the

effectiveness, functionality and identify opportunities for quality improvement. Internal audits are scheduled by the RMC / Vice-Rector for Quality Assurance and integration in education at the beginning of each academic year, taking into account the importance of the audited processes and subdivisions, the results of previous audits. The Audit Group consists of University staff trained and certified for this purpose through internal or external courses under the guidance of the RMC. The audit report, together with the corrective action requests initiated, is transmitted by the audit team chairman to the head of the audited subdivision.

At present, the curriculum of the Faculty of Medicine is classical, linear, based on disciplines. The educational plan includes fundamental disciplines, specialized and socio-humanistic disciplines, which are structured in compulsory and optional disciplines. The studies include theoretical courses, seminars and practical works, clinical internships, optional courses, and diploma thesis as part of the Graduate State Exam.

The educational plan is well structured, the curriculum's general guidelines include: student orientation, individual requirements; process focusing; opening to present and future needs; quality management, open educational environment, internationalization of training in terms of content and performance criteria. The weight of the disciplines is expressed in study credits (ECTS - 60 credits / year and 360 credits / faculty) and ensures good student mobility among international education institutions. The institution regulates the procedure of promoting the student from one year of study to another, depending on the accumulated study credits.

The curricular programme base is interdisciplinary and transdisciplinary, taking into account social, global, national, regional / local needs. **The content is organized** in such a way as to facilitate the contextualization and application of knowledge in different disciplines.

Examples of **horizontal integration** (concurrent) **would be the integration of the themes** of fundamental sciences: such as Anatomy - Histology (Position, anatomical projection on systems and organs / Microscopic and ultramicroscopic structure of healthy person's cells, tissues and organs); Biology - Histology (Cell's structural particularities / Particularities of cell functionality); Biochemistry - Physiology (Structure and properties of biological membranes / Membrane transport; Structure, biosynthesis, regulation of secretion, mechanisms of action of hormones / Physiological effects of hormones); Physiopathology - Morphopathology (Physiopathology of the respiratory, cardiovascular, excretory system / Morphological changes in the pathological processes of the respiratory, cardiovascular, excretory system) or the integration of the clinical disciplines: Radiology - Surgery-Semiology (Radiodiagnostics of traumas and diseases of the osteoarticular apparatus; respiratory system / Semiology of surgical diseases of the locomotor apparatus; respiratory system); Gastroenterology - Surgical diseases (Pathology of the small and large intestine. Definition, etiology, pathogenesis, diagnosis, clinic, treatment, prophylaxis, prognosis / Surgical pathology of the small intestine, large intestine); Endocrinology - Surgical diseases (Disease of the thyroid, toxic diffuse goiter, thyrotoxic adenoma, autoimmune thyroiditis, fibrous thyroiditis, subacute thyroiditis, endemic goiter, hypothyroidism, thyroid cancer, Surgical pathology of the thyroid gland).

As shown above, the Bachelor's degree study programme "Public Health" is structured on two cycles: preclinical and clinical. However, some of the clinical disciplines are introduced in the first semesters, and fundamental subjects are taught in the clinical cycle (students' contact with patients

takes place early in the second semester in compulsory discipline Primary Health Emergency; fundamental disciplines in year III (Pharmacology, Morphopathology, Physiopathology) are taught in parallel with Internal Medicine Semiology and Surgery – Semiology; some disciplines like Clinical Pharmacology (compulsory), Clinical Biochemistry, Clinical Microbiology, Clinical Physiopathology, Clinical Morphopathology (optional) are taught in IV, V, VI academic years in parallel with the medical disciplines; and at the end of the 2nd and 3rd year the students have to do the summer internship). We note that each theme requires an initial level of knowledge from previous disciplines; thus, the related disciplines are highlighted in each subject description. Vertical integration (sequential) examples might be: Biochemistry - Cardiology (Lipoprotein Metabolism / Dyslipidemias, Atherosclerosis); Physiology - Physiopathology - Cardiology (Physiology of the heart: functional features of the myocardial conduction system, cardiac cycle dynamics / the physiopathology of coronary insufficiency / coronary insufficiency: clinical picture, diagnosis, treatment); Microbiology, Virology, Immunology with Infectious Diseases - Epidemiology (Principles of classification and nomenclature of microorganisms; Morphology, structure and physiology of bacteria and viruses / Diseases caused by bacteria and viruses: clinical picture, laboratory diagnosis, treatment principles / Epidemiological feature and prophylaxis of infectious diseases).

The modernization and updating of lectures / courses takes place systematically, where the teachers, responsible for each subject, apply the performances of the scientific researches in the general and professional training of the specialists. Increased attention is paid to the improvement of didactic methodology, which is achieved through the implementation of modern educational technologies: problem study (clinical case), interactive techniques, evidence-based medicine, modern information technologies, including virtual ones, etc. Teaching methods, based on modern learning principles, favor students' progress and ability to participate in medical research, but also personal development as future specialists during the years of study.

The main stages of clinical case-centered teaching and learning are:

1. getting the initial information
2. generating an initial clinical hypothesis
3. highlighting additional data important to confirm the initial hypothesis
4. selecting laboratory tests and drawing up an investigation plan to specify the diagnosis
5. the formulation of a presumptive or definitive diagnosis
6. developing a treatment plan
7. the synthesis of the work done and the identification of the readings necessary for a better understanding of the problem presented.

Particular attention is paid to the acquiring and application of students' practical abilities.

As mentioned above, there is a separation between fundamental and specialized disciplines, and that is why the multidisciplinary course with PBL implementation involves the merging of several disciplines with impact in the study of neurosciences. The course is to be taught in the third year, the second semester. Finality - differentiated colloquium. The table below presents the academic curriculum for the third year, the Faculty of Public Health.

YEAR III

Nr.d /o	Disciplines	Semester V (17 weeks, 85 days)							Semester VI (17 weeks, 85 days)							Total credits	Total per year of study
		Total number of hours	Lectures	Practical works	Evaluation form: Examination	Differentiated	Colloquium	Total credits	Total number of hours	Lectures	Practical works	Evaluation form: Examination	Differentiated	Colloquium	Total credits		
1.	Physiopathology	85	34	51	●			6								6	85
2.	Morphopathology	85	34	51	●			6								6	85
3.	Internal diseases - Semiology	102	34	68			●	5	102	34	68	●			6	11	204
4.	Surgical diseases - Semiology	102	34	68			●	5	102	34	68	●			6	11	204
5.	Biostatistics and research methods	85	35	51	●			4								4	85
6.	Sanitary-hygienic insurance in exceptional situations	68	17	51		●		4								4	68
7.	Traumatology and orthopedics								85	34	51		●		4	4	85
8.	**NEUROSCIENCE**								**68**	**17**	**34**		**●**		**4**	**4**	**68**
9.	Sanitary microbiology								85	34	68	●			5	5	85
10.	Internship *								120		120	●			5	5	120
Total per semester		527	188	340	3	1	2	30	545	153	392	4	2	-	30	60	1072
Total per year of study		1072	341	732	7	3	2	60									

In order to achieve the proposed concept of the pilot project, the Neurology course, taught in the 5th year, will be replaced by the interdisciplinary course of Neuroscience in the third year. The content of the course will be adapted to the PBL concept for all integrated disciplines, starting with the identification of competencies, developing a clear methodology for formulating the clinical problem and ensuring group work guidance, formulating evaluation methods.

Curriculum content is not only informative but also formative, including a set of knowledge and skills - general and specific competencies, in order to train students in accordance with the medical learning outcomes and current and future requirements of society. At present, clinical skills

include anamnesis, clinical examination, procedures and investigations, action in case of emergency, first aid maneuvers, and communication with the patient.

3.3 DESCRIPTION OF THE PROGRAMME

Training is carried out on the basis of continuously improving study programmes in the tendency to align with international standards. In the training process, various interactive teaching methods, clinical case analysis, working directly at the patient's bed, evidence-based medicine, virtual programmes, etc. are applied.

Strategies and methods have a normative character and purpose to structure and model the learning process by making it dynamic, connected, tailored to the individual requirements of the student, involving both training and self-training, are innovative, centered on cognitivity, action, affective-attitudinal, inductive, deductive, analogous, mixed, algorithmic, and creative. Methods of stimulating the teaching process are at the basis of training and contribute to educating creativity, understanding the meaning of existing potential values. Analogue method, parabola, comparison, language, template breakage, brainstorming method as the most popular in recent years are used, original ideas being selected and subject to the attention of all participants in the discussion.

Courses, always updated and upgraded, are accompanied by clinical cases on the respective subject for a more efficient assimilation and memorization of the studied material. New methods of training are favored by the application of the algorithm principle in presenting the material, the assumption of tutelage responsibility of students in the argumentation of the diagnosis, the elaboration of the treatment and recovery plan of the patient, and the methods of prophylaxis of the diseases.

Particular importance is given to the acquisition of practical skills by students both during the module and during clinical internships.

In clinics, students attend morning conferences, weekly visits, presentation and discussion of seriously ill patients and patients presented for clinical conferences; they also attent at scientific conferences; anatomical and morphological; round tables with the participation of specialists from the Republic of Moldova and abroad to improve knowledge and practical skills in the diagnosis, treatment and prophylaxis of the diseases, as well as their optimization at the international level. Students are involved in the presentation of clinical cases or theoretical subjects at these manifestations.

The educational plan includes for each discipline a number of hours for individual study, so that the student becomes aware of the individual learning process, has the opportunity to prepare for his / her professional career and for lifelong learning.

The content of the study process is determined by:

- National Qualifications Framework on Professional Training Areas
- The educational plan
- The curriculum (analytical programmes) per course units.

The teaching-learning-evaluation process is carried out according to the **Educational plan** elaborated on the basis of the National Qualifications Framework and the Curriculum, which

includes: the disciplines ordered sequentially during the schooling, the discipline code, the degree of compulsoriness (compulsory or optional), its formative category (fundamental; training of general skills and competences; socio-humanistic orientation; specialization orientation); the number of hours allocated to each discipline (course, seminars, practical works, individual work), the number of credits allocated to the discipline and the form of evaluation.

The study programme at the Public Health specialty is conducted for 6 years. Each academic year consists of 2 semesters of 17 weeks (except for semester XII - 14 weeks), plus the examination sessions. Studies can only be organized full-time.

Of the 95 disciplines included in the educational plan:

- 74 are compulsory disciplines (77.89%);
- 21 are optional disciplines (22.11%).

The share in the educational plan of:

- fundamental disciplines is 25.4%
- specialized disciplines is 68.6%
- complementary disciplines is 6.2%.

The ratio between lectures and applicative activities (practical works, seminars, clinical internships) is 1: 2.69 (1936 course hours and 3675 hours of internships / practical works), the total being 7156 hours in 6 years.

- the share of internships in the educational plan - 9.12%.

The multidisciplinary course “Neuroscience” with PBL implementation is a combination of fundamental and compulsory specialty and project modules. The duration of the course is 1 semester (17 weeks), includes 68 academic hours of direct contact, finishing with the assessment - differentiated colloquium, and is allocated 4 transferable credits.

3.3.1 Curriculum on disciplines

In the SUMPh, the systematic process approach to curricular monitoring is applied by developing, implementing and improving the effectiveness of the Quality Management System in order to fully meet the needs of the beneficiaries by identifying and fulfilling their requirements and expectations. Thus, there is an evaluation system of the programme that monitors curricula and students’ progress and allows identification and correction of problems.

The process approach involves a permanent control over each process and of the interaction between processes based on the international standard ISO 9001-2008 implemented in the SUMPh since 2009. By implementing the standard ISO 9001: 2008, the SUMPh proves that:

- The Quality Management System is implemented in accordance with the requirements of this standard, is documented, maintained and continuously improved;
- Ensures compliance with quality policy;
- It consistently provides services that meet the requirements of the beneficiaries, as well as the regulations in force.

For continuous improvement, the Plan-Do-Check-Act model is applied in each process. Thus, the SUMPh plans and implements monitoring, measurement, analysis and improvement processes:

- to demonstrate compliance of the services with the established requirements;
- to ensure the compliance of the Quality Management System;
- to continuously improve system efficiency.

Curriculum monitoring programme of processes and results is ensured by applying the procedures of: *evaluating the beneficiary's satisfaction, assessing the quality of teaching* and *assessing the satisfaction of the teaching staff*, including all the elements necessary to meet the established requirements. The nominated procedures use the tools:

- CSB 8.2.1 / 1 Questionnaire for the evaluation of the satisfaction of the beneficiary, consisting of 20 items (Annex 7.1)
- CSP 8.2.1 / 1 Questionnaire for the evaluation of the quality of teaching, consisting of 19 items (Annex 7.2)
- CCD 8.2.1 / 2 Questionnaire for the evaluation of the satisfaction of the teaching staff, consisting of 23 items (Annex 7.3)

The process of evaluating the quality of teaching, the satisfaction of beneficiaries and teaching staff is carried out throughout the entire academic year through questionnaires evaluating their satisfaction with the delivered services / conditions created by the SUMPh.

The curriculum content (the analytical programme) is proposed by disiciplines, being examined and endorsed by the relevant Methodological Councils, the Curriculum Committee, and the Councils of the Faculties, which submit it for approval to the Scientific Council of the University within the general educational plan. Subsequently, the educational plan is approved annually by the Senate of the University.

Curricular content is reviewed periodically, emphasizing the pragmatic nature of medical education in line with the needs of the market. In the review and adaptation of the curriculum of the Faculty of Medicine, several decision-makers are involved in all study programmes: the dean and the vice-deans, the faculty council, the curriculum committee, the students' representatives (also part of the faculty council and the curriculum committee), representatives of the Students and Residents Association, representatives of the Union/Sindicate of SUMPh "Nicolae Testemitanu" collaborators.

Educational resources are allocated as needed, their analysis being made at the University's Scientific Council and the Board of Administration separately for each faculty study programme. Allocation of resources is based on the share of educational activities carried out by each discipline, both at the Bachelor's degree level and at the residency level.

The curriculum of the discipline has the following structure:

- ***Preliminaries*** (brief presentation of the purpose of the discipline);
- ***Administration of the discipline***, (description of assignment of topics and number of hours);
- ***Competencies*** obtained by the student through the study of the discipline;

- ***General / standard objectives of the discipline;***
- ***Reference objectives and content;***
- ***Suggestions for organizing individual work;***
- ***Selective bibliography;***
- ***Discipline evaluation;***
- ***Suggestions for individual work.***

The interdisciplinary course is proposed in the form below:

Discipline	Course	CLINICAL CASE
ANATOMY	Integrative anatomical details of the component parts of the central and peripheral nervous system.	**Cranio-cerebral trauma**
HISTOLOGY	Neuroembriology: morphogenesis.	**Arnold-Chiari**
	Neuroembriology: histogenesis.	
BIOCHEMISTRY	Nervous system metabolism.	**Parkinson's desease**
ANATOMY	Functional anatomy of the nervous system. Sensitivity. Motility: pyramidal pathway and extrapyramidal system.	**Multiple sclerosis**
IMAGING	Imaging anatomy of the nervous system.	**Subarachnoid haemorrhage**
PHYSIOLOGY	Brain mechanisms to control motivation and behavior. Thinking, learning and memory.	
PATHOLOGICAL PHYSIOLOGY	Pathophysiology of memory disorders and cognitive function. Physiopathology of cerebral ischemia.	**Alzheimer's desease**
MORPHOPATHOLOGY	Morphopathology of strokes, CNS neoplasias and neurodegenerative diseases.	**Cerebral tumor**
NEUROLOGY	Stroke: risk factors, clinical manifestations, diagnosis, emergency treatment.	
	Semiology of cerebral cortex damage. The facial nerve system. Central mimic paresis and peripheral mimic paresis. Diagnosis of localization of facial nerve affections. Principles of treatment.	**Facial neuritis**
PSYCHIATRY	Sleep, instinctuality, affectivity, knowledge and motivation: the neurobiological substrate and the associated psychiatric disorders.	

NEUROSCIENCE
HUMAN ANATOMY DISCIPLINE

Items	Requirements
Title of the lecture	**MORPHOLOGY OF THE NERVOUS SYSTEM**
Objectives	Integrative study and understanding of the morpho-functional features of the nervous system and the use of this knowledge in the acquisition of fundamental and clinical disciplines, to prevent various diseases, for the correct diagnosis and treatment. Anatomy is the science of living forms, transformations and reorganizations of the human body; it includes a systematization and integration of knowledge about the connection and the mutual influence of the somatic and visceral systems; about the influence of various factors of the external environment on the activity of the viscera and the central nervous system. Solid interdisciplinary knowledge is required for the good understanding and learning of the discipline.
Theme proposed	**General notions** **Classification of the nervous system** • Topographic principle (central and peripheral); • Functional principle (somatic and vegetative). **Central nervous system** **The general structure** (primary and secondary cerebral vesicles, their derivatives, the encephalum overview, components, origin, organization). **Spinal cord** - Functional anatomy, limits, dimensions, topography, **external conformation** (intumescent, ditches, terminal fillet) and **internal structure** (gray and white matter). The segmental structure of the spinal cord. **Brainstem**, its components. **External conformation and internal structure -** limits, external conformation, internal structure (the gray and white matter) of the brain (sagittal, transverse, frontal sections): the spinal bulb; Deck. Rhomboid fossa. The romancefalic Isthmus; Cerebellum; Mesencephalon. Reticular formation; Diencephalon. Pituitary port system; Telencefalo. The limbic system. **Brain shells** (cerebral and spinal cord meninges) and its derivatives. **Ventricular system of the encephalus** (ventricles IV, III, lateral - topography, walls, communications). **Circulation of the cerebrospinal fluid.** **Blood vascularization, venous and lymphatic drainage of CNS**. **The peripheral nervous system** **Cranial nerves (I-XII)** [nuclei projected into the rhombic fossa, fibral component, topography, trejectory, branches, interconnections, somatic (dermatomes, myotomes) and vegetative innervation areas]: **Spinal nerves** (general structure). Dorsal and ventral branches. Plexors, interconnections, somatic (dermatomes, myotomes) and vegetative innervation areas.

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Professional skills	**Students shall**: 1. know the structure of NS formations at macro- and microscopic level, their function, their topography etc. 2. appreciate the importance of knowledge in the field of human anatomy for the acquisition of fundamental and clinical medical disciplines; 3. become aware of the applicability of anatomical knowledge regarding the diagnosis and treatment of diseases.
Teaching methods and course materials	Courses will be done through videoprojections. PowerPoint and Smart Notebook course support.
Teaching methods and materials for practical works	Practical works will be performed in the department's laboratories (dissection room). Presentations will be done in PowerPoint and Smart Notebook. In order to ensure a high degree of interactivity, the interactive Smartboard will be used to defend the group work. During the practical works there will be studied the pre-prepared anatomical parts, will be used drawings/pictures, casts, tables, and the exhibits from the Anatomic Museum will be studied.

Items	Requirements
Title of the lecture	**MORPHOFUNCTIONAL PARTICULARITIES OF THE NERVOUS SYSTEM. VEGETATIVE NERVOUS SYSTEM - GENERALITIES.**
Objectives	Integrative study and understanding of morpho-functional features of the nervous system and use of this knowledge in the acquisition of fundamental and

	clinical disciplines, for the prevention of various diseases, diagnosis and correct treatment. Anatomia este ştiinţa formelor vii, a transformărilor şi reorganizărilor corpului omenesc, ea include o sistematizare şi integrare a cunoştinţelor despre conexiunea şiinfluenţa reciprocă a sistemelor somatice şi viscere; despre influenţa diferitor factori ai mediului extern asupra activităţii viscerelor şi sistemului nervos central. Anatomy is the science of living forms, transformations and reorganizations of the human body; it includes a systematization and integration of knowledge about the connection and the mutual influence of the somatic and visceral systems; about the influence of various factors of the external environment on the activity of the viscera and the central nervous system. Solid interdisciplinary knowledge is required for the good understanding and learning of the discipline.
Theme proposed	**Morphological support of the reflex arc.** The reflex arc as the basic morpho-functional unit of the nervous system (simple-compound, somatic-vegetative). The related and interleaving components of the reflex arc. Synapse. **The relative** (sensitive) **link** of the reflex arc. Sensitive analyzer. Definition and classification of analyzers. Sensory organs [skin analyzer (nociceptive, thermal, tactile, vibrational sensitivity); visual analyzer (NC II); acoustic analyzer (NC VIII); vestibular analyzer (NC VIII); olfactory analyzer (NC I); the tasting analyzer; proprioceptive analyzer; visceral analyzer]. **The relative** (motor) **link** of the reflex arc. Motor analyzer. The mion - the neuro-motor unit. **Somatic motor analyzer** (somatic and branhial). The pyramidal system (cortico-nuclear tract, lateral and anterior cortico-spinal). Extrapyramidal system (cortico-ponto-cerebelo-rubro-spinal tract, etc.). Complex (praxis) motility. Signaling systems I and II. Motility of eyeballs (cranial nerves III, IV and VI). **Visceral motor analyzer** (vegetative). **VEGETATIVE NERVOUS SYSTEM - generalities.** **Sympathetic and parasympathetic nervous system - central and peripheral portions.** ✓ The vegetative nervous system - structural and functional particularities. Reflex arc at the vegetative nervous system. ✓ The components of the vegetative nervous system. The centers of the vegetative nervous system, its peripheral portion. ✓ Vegetative nervous fibers - origin, types, structural and histochemical features, distribution paths, terminations. ✓ The sympathetic part of the vegetative nervous system, central and peripheral formations. Sympathetic chain - general structure, topography, segments, ganglia, types of branches.

	✓ Parasympathetic portion of the vegetative nervous system, central and peripheral formations. ✓ General notions about **metasimpatic** system and **nonadrenergic**, **noncolinergic** nerve fibers. ***Sympathetic*** **vegetative ganglia** (paravertebral (sympathetic chain) and prevertebral) and parasympathetic (paraorganic and intra-organic / intramural). Ciliary, pterigopalatin, submandibular, sublingual and otic ganglion - localization, external conformation, structure, connections, branches, innervation areas. **Innervation of the viscera** (nerve sources, fibrillar structure, inra -and periorganic visceral plexus). The general characteristic of the vegetative nervous plexus in the thoracic, abdominal and pelvis cavity, the peculiarities of their distribution in the parenchymal and cavitary organs (vegetative plexus in the thoracic, abdominal, pelvis cavities - formation, distribution, innervation areas. Innervation of the abdominal and pelvic viscera).
Bibliography	1. Stefanet M. Anatomia Omului. Vol. II. Chişinău: CE-P Medicina, 2013, 432 p. 2. Stefanet M. Anatomia Omului. Vol. III. Chişinău: Sirius SRL, 2013, 428 p. 3. Sinelnicov R.D., Sinelnicov Ia. R. Атласанатомиичеловека I, II, III и IV (oricare ed.). 4. Catereniuc I., Lupaşcu T., Babuci A. et al. Culegere de scheme la anatomia omului / Сборниксхемпоанатомиичеловека / Collection of schemes for humananatomy. Ed. a III-a (revăzută şi completată). Chişinău, 2012 5. Drake R.L., Vogl W. et al. Gray·sAnatomy for students. Philadelphia…Toronto, 2005. 6. Drake R. L., Vogl W., Mitchell A. W. M., Tibbitts R. M., Richardson P. E. Gray·s Atlas of Anatomy. Elsevier, 2008. 7. Kahle W., Frotscher M. Color Atlas of HumanAnatomy, vol. III, NervousSystemandSensoryOrgans. Stuttgart-New Jork, 2003. 8. Netter F. H. Atlas of HumanAnatomy. Elsevier, 2006. 9. Лобко П. И., Мельман Е. П., Денисов С. Д., Пивченко П. Г. Вегетативнаянервнаясистема. Атлас. Минск, 1988.
Professional skills	**Students / residents shall:** 1. know the structure of NS formations at macro- and microscopic level, their function, their topography etc. 2. appreciate the importance of knowledge in the field of human anatomy for the acquisition of fundamental and clinical medical disciplines; 3. become aware of the applicability of anatomical knowledge regarding the diagnosis and treatment of diseases.
Teaching methods and course materials	Courses will be done through videoprojections. PowerPoint and Smart Notebook course support.

Teaching methods and materials for practical works	Practical works will be performed in the department's laboratories (dissection room). Presentations will be done in PowerPoint and Smart Notebook. In order to ensure a high degree of interactivity, the interactive Smartboard will be used to defend the group work. During the practical works there will be studied the pre-prepared anatomical parts, will be used drawings/pictures, casts, tables, and the exhibits from the Anatomic Museum will be studied.

NEUROSCIENCE COURSE - DISCIPLINE OF HISTOLOGY

Items	Requirements
Title of the lecture	**Neuronal Embryology**
Objectives	The integrative understanding of a science situated in the convergence of various domains ranging from molecular structure to complex cerebral cognitive functions, the basis of human behavior and evolution.
Theme proposed	1. Aspects of neuronal development. ✓ Neural induction. ✓ Regionalization. ✓ Neural tube formation. ➢ Dorsoventral shaft. ➢ Rostrocaudal shaft (anteroposterior). 2. Early / late neuritis. ✓ Neural migration. ✓ Radial migration. ✓ Tangential migration. ✓ Axophilic migration. 3. Migration of neural crest cells. 4. Neural migration in the central nervous system (cortical histogenesis). 5. Neural determination. 6. The origin and generation of neural progenitor cells. 7. Neurons and glia of the central nervous system. 8. Sensory neurons of the peripheral nervous system. 9. The formation of synaptic connections in the central and peripheral nervous system. 10. Neurotropic factors and apoptosis.
Bibliography	1. Gusac P, Embriologie umană. Lucrări practice pentru studenţii în medicină. Chişinău, SUMPH "Nicolae Testemiţanu", 2000. 2. Miu AC, Olteanu AI, Neurostiinte - de la mecanisme moleculare si celulare la comportament si evolutie (vol. 1 Dezvoltarea sistemului nervos), Ed. Dacia, Bucuresti, 2002.

	3. Sadler TW, Langman's medical embryology. LippincottWilliams&Wilkins, 2004. 4. Larry Squire, Darwin Berg, Floyd Bloom, Sascha du Lac, AnirvanGhosh, Nicholas Spitzer, FUNDAMENTAL NEUROSCIENCE, thirdedition, 2008
Professional skills	1. detailed understanding of central and peripheral nervous system development processes (normal and pathological conditions) 2. realizing the foundations on which neuroscience is based
Teaching methods and course materials	Courses will be done through videoprojectionss. PowerPoint and Smart Notebook course support.
Teaching methods and materials for practical works	Practical works will be done in the department's laboratories (room for practical works, histological laboratory, and immunohistochemical laboratory), using optical microscopes, and histological blades. Presentations will be done in PowerPoint and Smart Notebook. In order to ensure a high degree of interactivity, the Interactive Smartboard will be used for the defence of the group work.

Items	Requirements
Title of the lecture	**Neuronal morphology**
Objectives	The integrative understanding of a science located at the convergence of various domains ranging from molecular structure to complex cerebral cognitive functions, the basis of human behavior and evolution.
Theme proposed	1. Structure of the neuron (cell body, dendrite, axon). 2. Classification of neurons. 3. Glial cells (macroglia, microglia) 4. Myelin sheath (amylinic and myelin nerve fibers). - The process of myelination in the central nervous system and the peripheral nervous system. 5. Neuronal degeneration and regeneration. 6. Receptors. Inter-neuronal synapse and effector synapse. 7. Histology of the central nervous system (spinal cord, brainstem, encephalus, cerebellum) and peripheral nervous system. 8. Brain membranes (brain and spinal cord).
Bibliography	1. Larry Squire, Darwin Berg, Floyd Bloom, Sascha du Lac, AnirvanGhosh, Nicholas Spitzer, FUNDAMENTAL NEUROSCIENCE, thirdedition, 2008 2. Dale Purves, George J. Augustine, David Fitzpatrick, William C. Hall, Anthony-Samuel Lamantia, James O. Mcnamara, S. Mark Williams. NEUROSCIENCE, thirdedition, Publishers Sunderland, Massachusetts U.S.A, 2004 3. Miu AC, Olteanu AI, Neurostiinte - de la mecanisme moleculare si celulare la comportament si evolutie, Ed. Dacia, Bucuresti, 2002.

Professional skills	1. the detailed understanding of the microscopic structure of the nervous tissue, with the emphasis on structural particularities for the central and peripheral nervous system. 2. drawing the fundamental links with the physiology and pathology of the nervous system.
Teaching methods and materials	Courses will be done through videoprojections. PowerPoint and Smart Notebook course support.
Teaching methods and materials for practical works	Practical works will be done in the department's laboratories (room for practical works, histological laboratory, and immunohistochemical laboratory), using optical microscopes, and histological blades. Presentations will be done in PowerPoint and Smart Notebook. In order to ensure a high degree of interactivity, the Interactive Smartboard will be used for the defence of the group work.

NEUROSCIENCE COURSE - BIOCHEMISTRY DISCIPLINE

Items	Requirements
Title of the lecture	**Neurochemistry**
Objectives	Knowledge of the structural and metabolic peculiarities of the nervous system functionality; understanding the molecular mechanisms of nervous system diseases.
Theme proposed	1. Particularities of chemical composition of nervous system cells. 2. Membrane transport. Blood-brain barrier - biochemical aspects. 3. Particularities of energetic, glucidic, lipid and protein metabolism in nervous cells. 4. Nervous transmission and cellular signaling. a) Presynaptic phenomena (biosynthesis of mediator substances, storage, release of synaptic mediator, recapture). b) Postsynaptic phenomena (synaptic receptors, recognition and fixation of the neurotransmitter on the receptor, transduction of synaptic signals, post-synaptic electrochemical manifestations). 5. Synaptic chemical mediation. a) Cholinergic mediation. Acetylcholine. b) Monoamineergic mediation (catecholamines, serotonin, histamine). c) Aminoacidergic mediation. d) Purineergic signaling. e) Opioid and non-opioid peptides.
The title of the practical work	**Biochemical aspects of some pathologies of the nervous system - 3h.**
Theme proposed	1. Biochemical aspects in Parkinson's dDisease. Neurobiology of Alzheimer's disease. 2. Ischemia and reperfusion of the brain: the cellular and molecular mechanisms of stroke. Apoptosis and necrosis. 3. Neurochemistry of some normal psychiatric processes (memory, learning) and mental disorders (schizophrenia, autism, depression, anxiety)

Bibliography	1. Scott T. Brady. Giorge J. Siegel. Basic neurochemistry. Principle of molecular, cellularand medical neurobiology. American Society of Neurochemistry. Elsevier inc. 2012. 2. Haulică I., Dobrescu G. Transmiterea sinaptică. Repere structurale și funcționale. București, 1999.
Professional skills	1. Understanding the molecular mechanisms of the processes underlying the functioning of the nervous system; 2. Acquiring the relationships between chemical processes and achieving synaptic transmission and intracellular transduction of the mediator signal. 3. Knowledge of the biochemical aspects of the nervous system pathology.
Teaching methods and course materials	Courses will be done through videoprojectionss. The course support will be done in PowerPoint.
Teaching methods and materials for practical works	Practical works will be conducted in the department's laboratories. Presentations will be made in PowerPoint. Situational problems and interactive teaching methods will be used.

NEUROSCIENCE COURSE – IMAGING DISCIPLINE

Name: **Imaging methods of the central nervous system.**

Neuroradiology:

- **Standard radiology**
- **Transcranian Doppler**
- **Computerized tomography**

a) Native sections in CT (5.0 mm)
b) 3D reconstructions (1.5 mm sections)
c) CT angiography

- **Magnetic resonance imaging**

a) Positioning sections in MRI
b) Thickness of sections in MRI
c) The fundamental sequences used in MRI

- The sequence T1
- The sequence T2
- Magnetic resonance angiography

Strokes

- **MRI protocol in case of suspected stroke**
- **Ischemic arterial stroke**

- Acute phase:

* CT
* Angio-CT
* IRM

* Angio-IRM

- Subacute and chronic phase

* CT
* IRM

- Ethylogy of ischemic artery stroke

– **Venous ischemic stroke (cerebral venous thrombosis)**

- Cerebral venous thrombosis imaging.

* CT
* Angio-CT
* IRM
* Angio-IRM

DISCIPLINE MORPHOPATHOLOGY

THE COURSE PLAN

Pathology of SNC

- ***Cerebral edema, intracranial pressure, hernia, hydrocephalus.***
- ***Congenital malformations.***
- ***Cerebrovascular diseases.***
  - *Hypoxia, ischemia, heart attack.*
  - *Intracranial haemorrhage.*
  - *Hypertensive cerebrovascular disease.*
- ***Infections.***
  - *Acute meningitis.*
  - *Acute focal suppurative infections.*
  - *Chronic bacterial meningoencephalitis.*
  - *Viral meningoencephalitis.*
- ***Demyelinating diseases.***
  - *Multiple sclerosis.*
- ***Degenerative diseases.***
  - *Alzheimer's disease.*
  - *Parkinson's disease.*
- ***Tumors.***
  - *Gliomas.*
  - *Neuronal tumors.*
  - *Poorly differentiated neoplasms.*
  - *Meningiomas.*
  - *Metastatic tumors.*

NEUROSCIENCE COURSE - PSYCHIATRY DISCIPLINE

Items	Requirements
Title of the lecture	Introduction to psychiatry. Elements of psychiatric semiology. Neurotic and stress-related disorders. Somatoform disorders.
Objectives	• at the end of the course the students will have knowledge about psychiatry as medical specialty, classification elements of psychiatric pathology, semiotics relevant to neurotic pathology, biological substrate of neurotic pathology. • at the end of the course students will be initiated to distinguish neurosis from psychosis.
Theme proposed	• Introduction to psychiatry. o Psychiatry, psychiatric pathology, pejorative terms used in psychiatry, neurosis vs psychosis, elements of classification of mental disorders. • Elements of psychiatric semiology. o Disorders of perception, attention, memory, thinking, affection, will, neurobiological correlations. • Neurotic and stress-related disorders (F40-F48). o Classification, general characteristic of mentioned nosologic group according to CIM-10 criteria. • Somatoform disorders (F45). o General characteristics, neurobiological correlations, positive and differential diagnostic criteria, principles of treatment. • Psychosomatic elements. o Pathogenesis, respiratory and cardiovascular system.
Bibliography	1. Cornuțiu G., Breviar de psihiatrie, Editura Universității din Oradea, 2008. 2. Kaplan &Sadock's Comprehensive Textbook of Psychiatry, 9th Edition, Lippincott Williams &Wilkins, 2009. 3. Prelipceanu D., Psihiatrie clinică. Editura Medicală, București, 2013. 4. Sadock Benjamin J., Manual de buzunar de psihiatrie clinică, Editura medicală, 2001.
Professional skills	• The ability to distinguish neurosis from psychosis, to appreciate neurotic symptoms, to assess somatoform disorder, and to consider psychosomatic etiopathogenesis in explaining some therapeutic diagnoses.
Teaching methods and course materials	• Courses will be carried out through: computer with reading system of PowerPoint documents, image projection system (VGA-HDMI compatible projector), screen, pointer, study room. Course support done in PowerPoint and PDF document previously provided before the course.
Teaching methods and materials for practical works	• Practical works will be carried out within the Psychiatric Clinical Hospital (room for practical works, clinical departments). Presentations will be done in PowerPoint. In order to ensure a high degree of interactivity, clinical cases with differential diagnosis will be used to defend the group work.

NEUROSCIENCE COURSE - NEUROLOGY DISCIPLINE

Items	Requirements
Title of the lecture	**Neurological examination**
Objectives	Acquiring the method of neurological clinical examination for the purpose of determining the location of the pathological process, assessing the functioning of the central and peripheral nervous system components, as well as the muscular system.
Theme proposed	1. The specific of the neurological examination. ✓ Does the lesion have a unique location? ✓ Does the lesion have more outbreaks? ✓ Does the lesion have a diffuse location? ➢ Central nervous system suffering. ➢ Peripheral nervous system suffering. 2. Neurological anamnestic. ✓ Analysis of the accuses. ✓ Evolution of the disease. ✓ Family anamnesis. ✓ Personal and social antecedents. ✓ Formulation of the general impression about the patient. 3. Examination of the cranial nerve function. 4. Examination of sensitivity. 5. Examination of motility. 6. Researching meningian signs. 7. Examination of vegetative nervous system function.
Bibliography	Gavriliuc M, Examenul Neurologic. Chişinău, „Tipografia-Sirius"; 2012. Gherman D, Moldovanu I, Zapuhlâh G. Neurologie și Neurochirurgie. Manual. Chișinău: Centrul Editorial-Poligrafic Medicina; 2003. Hauser SL, Josephson SA. Harrison'sNeurology in Clinical Medicine. 2nd ed. New York: McGraw-Hill; 2010.
Professional skills	1. knowing the sequence of the neurological examination
Teaching methods and course materials	Courses will be done through videoprojectionss. PowerPoint course support.
Teaching methods and materials for practical works	Practical works will be done in the rooms for practical lessons of the neurology department, using the algic, thermal sensing devices, the cameron, the neurological hammer. There will be presented patients from the Neurological Clinic.
Items	**Requirements**
Title of the lecture	**Higher Cerebral Functions**

Objectives	Determining the patient's consciousness. Appreciation of cognitive functions of the patient, realization of differential diagnosis between disorders of higher cerebral functions and psychiatric pathology.
Theme proposed	1. Level of consciousness. 2. Cognitive functions - Orientation. - Attention. - Memory. - Calculation. - Speech. - Writing. - Reading - Praxis. - Gnosis. 3. Acute states of disorder and depression of consciousness. 4. Unconscious patient's examination.
Bibliography	1. Gavriliuc M, Examenul Neurologic. Chişinău, „Tipografia-Sirius"; 2012. 2. Gherman D, Moldovanu I, Zapuhlâh G. Neurologie şi Neurochirurgie. Manual. Chişinău: Centrul Editorial-Poligrafic Medicina; 2003. 3. Hauser SL, Josephson SA. Harrison'sNeurology in Clinical Medicine. 2nd ed. New York: McGraw-Hill; 2010.
Professional skills	1. knowing how to examine higher brain functions 2. unconscious patient's examination
Teaching methods and course materials	Courses will be done through videoprojections. PowerPoint course support.
Teaching methods and materials for practical works	Practical works will be done in the rooms for practical lessons of the neurology departement; patients with disorders of higher cerebral function will be presented and examined.

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Introducing Problem Based Learning in Moldova: Toward Enhancing Students' Competitiveness and Employability
www.pblmd.aau.dk

"BSc in Software Engineering" Pilot Student-Centered Active-Learning Study Programme

Technical University of Moldova

Work Package 3

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Chisinau, 2016

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1 INTRODUCTION

The aim of the project is to improve the higher education system in the Republic of Moldova by aligning it to the European higher education framework, enhancing the mobility of teaching staff and students, making sure that young specialists meet the needs of the labor market.

For this stage, the Moldovan team visited several partner universities in Europe to have a better understanding of the problem-based learning methodology / PBL and ICT study programmes. As a result of these visits, the team had the objective develop this comparative analysis report based on the study programmes provided at AAU, UOG and TUM. Based on this comparative analysis, the team has developed the PBL Bachelor's degree programme in the field of ICT.

Table 1: The team that developed the study programme

Study programme	**Pedagogical training**
National coordinator: Larisa Bugaian TUM rector: Viorel Bostan, Prof. Task-force team leader: Ciorbă Dumitru, associate Prof. Task-force team members: Victor Beşliu, associate Prof. Irina Cojuhari, associate Prof. Rostislav Călin, lecturer Mihaela Balan, lecturer	National coordinator: Larisa Bugaian TUM rector: Viorel Bostan, Prof. Task-force team leader: Maria Vasiliev, associate Prof. Task-force team members: Mariana Catruc, lecturer Mihaela Balan, lecturer Elena Gogoi, lecturer

2 LITERATURE ANALYSIS

2.1 INTRODUCTION

Problem based learning / PBL is an educational conceptual framework that is currently actively promoted in several university courses (Boud & Falchikov 2006; Dalsgaarda & Godska 2007; Sadlo 2014; McLoughlin & Luca 2002; Richardson 2005). PBL is an active learning methodology based on the investigation of real scenarios that promote long-term profound learning (Parkinson and St. George, 2003).

PBL is both a pedagogical approach and an educational conceptual methodology that simultaneously develops critical thinking and disciplinary knowledge, involves students in an active role in problem solving, provides a deeper, rich learning experience and confronts students with real situations (Blackburn, 2015).

Today higher education is different from the one that has been decades ago. The idea of placing the student at the heart of the study process brings profound changes to the higher education system.

There are various techniques that come in handy to adapt PBL to train engineers such as Agile-PBL, but the study (Zapater, et al., 2013) argues that the methodology itself is not sufficient to increase student motivation.

The PBL format assumes that „it is better for students to be able to apply knowledge in a new situation than to know answers to „old" questions" (Gentry, 2000, p. 6). PBL requires students to identify contextualized problems, investigate these problems and implement significant solutions. This method develops students' critical thinking and promotes creative skills. Motivation increases as students transfer knowledge to new situations. Teachers adopt the role of facilitators of learning, guiding the learning process and promoting a questioning environment (Blackburn, 2015).

2.2 POLITICS OF STUDENT-CENTRED PBL STUDY PROGRAMME AND CURRICULUM CHANGE

Problem-based learning is defined by Finkle and Torp in Savery & Duffy (1995) as „a curriculum development and an education system that simultaneously develops both problem-solving strategies and the basis of disciplinary knowledge and skills by placing students in the active role of finding solutions to problems faced with a poorly structured problem that reflects real world problems".

An important moment of PBL is that learning resulting from a resolution of the problem is often more important than the solution (Hirca, 2011).

Torp and Sage (2002), list three main features of PBL:

1. Involves students as beneficiaries in a problem situation.

2. Organizes curriculum around a holistic problem, facilitating student learning in relevant and connected ways.
3. Creates a learning environment where teachers train and guide student thinking by facilitating deeper levels of understanding.

Cognitive learning approach means that learning is organized around problems that will be solved within projects. It is a central principle for developing motivation. A problem (a miracle, an anomaly, contradiction, needs, etc.) creates the starting point for learning processes, places learning in a context, and bases learning on student experience.

Content approach aims at interdisciplinary learning, which can go beyond the traditional boundaries based on subject and methods. It is an exemplary practice, meaning that the learning outcome is exemplary for the general objectives of the curriculum.

Social approach is **team-based learning**. The aspect of team learning is at the basis of learning as a social act in which learning through dialogue and communication takes place. The social approach also refers to the concept of the participant oriented toeards learning, which indicates a collective ownership of the learning process and, in particular, the formulation of the problem.

Professor X.Y. Du and others (2009) proposed a series of PBL principles and important elements taken into account in the development of study / analytical programmes. (Figure 1, Figure 2)

Figure 1. PBL: Learning principles (X.Y. Du et al., 2009)

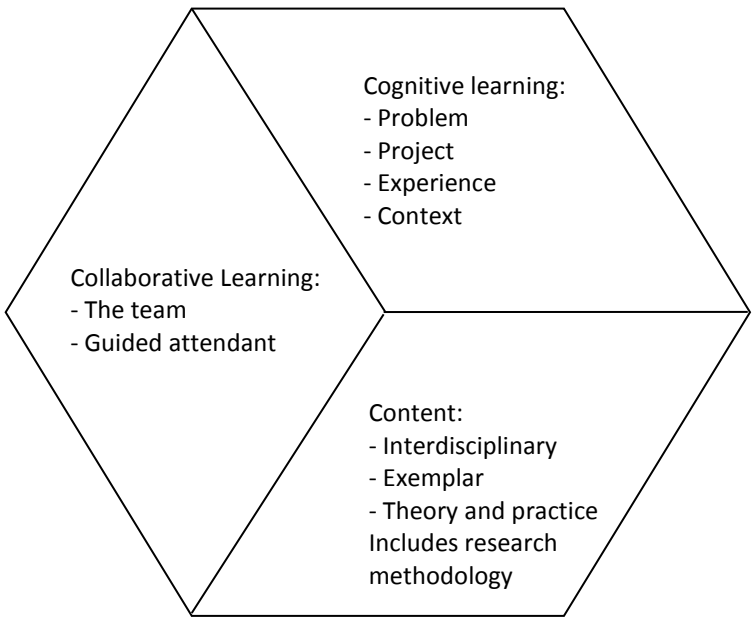


Figure 2. PBL elements for the curriculum

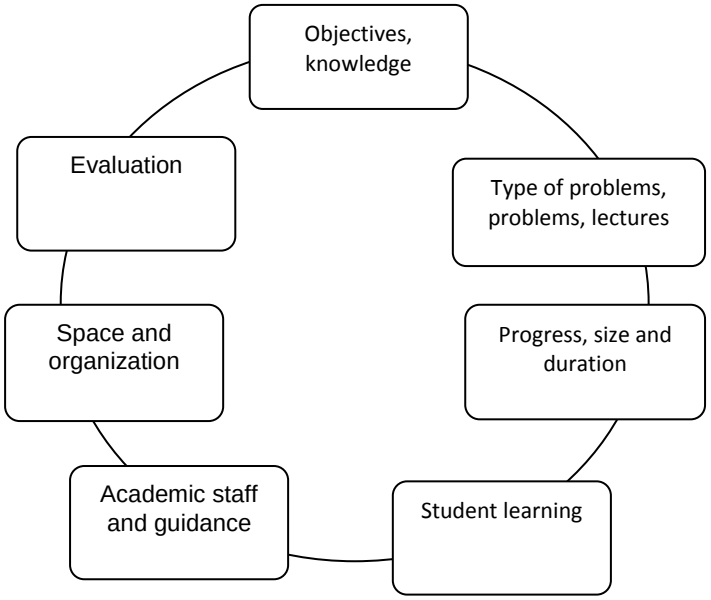


Table 2. Spectrum of PBL curriculum elements (X.Y. Du et al., 2009).

Curricular Elements	Disciplines and Teacher Oriented Approach	Innovative and student-centered approaches
Objectives and knowledge	Objectives of traditional disciplines Discipline knowledge	PBL and methodological objectives. Interdisciplinary knowledge.
Types of problems and projects	Problems - narrow, well-defined, discipline project, Bachelor's degree project. The course determines the project.	Open Well-defined problems. Problem based projects. Innovative projects. Project support courses.
Progress, size and duration	Progress is not visible. A minor part of the curriculum	Clear and visible progress. The major part of the course / curriculum.
Student learning	There are no support courses. Accumulation of knowledge. Collaboration for individual learning.	Support courses. Knowledge formation. Collaboration for innovation.
Academic staff and guidance	Is not coordinator. Supervision controled by the teacher.	Training courses. Coordinator / person to guide progress.
Space and organization	Traditional course management and lecture-based curriculum. Traditional structure of the library. Lecture halls for lectures.	Administrative support. The PBL curriculum. Library supporting PBL. Group workspaces.
Evaluation	Individual evaluation. Summative course evaluation.	Group evaluation. Formative evaluation.

2.3 CHANGING THE STUDENT-TEACHER RELATIONSHIP

Student centered teaching methods shift the activity focus from the teacher to the student and the role of teachers in PBL changes from a „all-knowing" to a mentor or guide. The teacher must rather pass on the control to the students and allow them to make their own way of answering, rather than pointing the way.

Quitting control is the part of the PBL for which teachers usually struggle most. However, not only the teacher has to change. Students also need to learn to see their teacher as a guide, not the person with all the answers. It is only after this partnership between student and teacher is formed that true learning can take place. „Teachers have a huge responsibility because they are the first contact point with their students and have an extraordinary influence on the way they learn." (Gentry, 2000, p. 11)

Changing the role of the teacher	
From	To
Knowledge transmitter	Guiding and supervising knowledge
Control of the learning process	Creating the environment for learning
Permanent expert	Collaborator, co-student
Learns to use ICT	Uses ICT to increase learning
Deductive / Explanatory	Interactive / Experimental
Changing the role of the student	
From	To
Student in passive role	Student in the active role of learning
Reproduction of knowledge	Production of knowledge
Teacher dependence	Autonomy of learning
Isolated learning	Learning through collaboration
Learning based on content only	Learning to learn / Think / Create and communicate

Changing the emphasis from teaching to learning can create a more interactive and engaging learning environment for teachers and students. This new environment also involves a change in the roles of both teachers and students. The role of teachers will change from a knowledge transmitter to a facilitator, a knowledge navigator, and sometimes a co-student. The new role of teachers requires a new way of thinking and understanding of the new vision of the learning process (Shyamal Majumdar, 2006).

2.4 PROBLEM-BASED AND ACTIVE LEARNING

Student centered teaching methods change the focus of activity from the teacher to the student. These methods include **active learning** where students solve problems, ask questions, formulate their own questions, discuss, explain, debate or suggest brainstorming sessions during the lesson; **collaborative learning**, where students work in teams on problems and projects under

conditions that ensure both positive interdependence and individual responsibility; **inductive teaching and learning**, where students are first presented with the challenges (questions or problems) and then they have to learn the course material in the context of solving the challenges.

Problem based learning (PBL) is an approach that encourages active learning through the creation of environments and tasks offered by social-constructivist learning theory (Mehdi Karami, et al., 2013). **Active learning** is generally defined as any training method that involves students in the learning process. In brief, active learning requires students to do meaningful learning and think about what they are doing. While this definition could include traditional activities, such as homework, in practice, active learning refers to the activities proposed in the classroom. The basics of active learning are student activity and involvement in the learning process. Active learning is often in contrast to the traditional lesson where students passively receive information from the instructor (Michael Prince, 2004).

2.5 IMPACT OF ICT ON THE LEARNING PROCESS

Nowadays, we experience a broad use of ICT in education and a lot of schools all over the world that have been equipped with technological facilities. Churchill (2009) states that ICT adds a new dimension to teaching efficiency by facilitating teachers' activities to do things that would not be possible in traditional lessons (Mehdi Karami, et al., 2013).

The main focus of ICT use in the learning process is to improve the learning process, motivate and involve students, promote collaboration, create a student centered culture. This allows moving towards an independent and autonomous teaching and learning model that will promote creativity and critical thinking. It is considered that students will be able to collect, select, analyze, organize, expand, transform and present their knowledge by using ICT in an active and authentic learning paradigm. Teachers will create a new, flexible, open and interactive learning environment. ICT should help teachers and students communicate and collaborate without barriers, make students autonomous, and allow teachers to bring the world into classroom activities.

A basic principle is that the use of ICT changes the distribution of information resources in the teaching and learning area and changes the relationship between educational participants (Shyamal Majumdar, 2006).

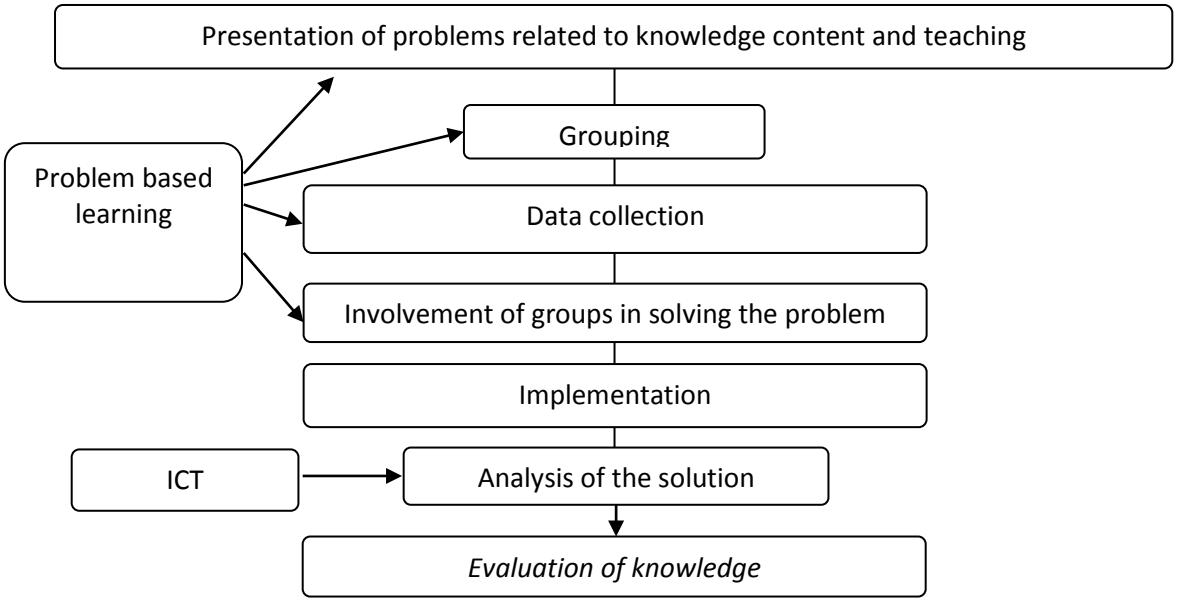
At the moment, we have a whole set of technological tools and possibilities to simplify traditional education, which can also be used for PBL methodologies:

- online storage, information and knowledge collecting and storing;
- eLearning, tools for presenting information and knowledge;
- ePractice / eSimulation, communication, teamwork, providing practical learning (a rich set of experiences and practical simulations, real cases and problems, including the use of technology and augmented reality);
- Integration, tools for processes and management of the learning system, with possibilities of integration and collaboration with other systems;
- mobile, the possibilities of integrating and using all mobile platforms and technologies.

Technology has enabled the development of student-centered education as well as PBL. Technology is a tool that allows students to access an almost unlimited amount of information. In

a student-centered class, students can become active by searching for information quickly and efficiently on the World Wide Web or by using research software. „When technology is thought of as a support tool or student project creation, the room begins to become student-centered."

Figure 3. The model proposed for integrating the PBL and ICT methodology (Mehdi Karami, et al., 2013)



2.6 CONCLUSIONS

Student-centered problem-based learning maximizes student involvement in the learning process. In a PBL lesson, students will be able to use the knowledge they have and apply them to a significant problem.

Students begin to see how their knowledge helps them solve the problems of life, thus giving them a love for learning and turning them into lifelong students. As education teaches to embrace this new type of teaching, teachers will have to learn to teach students the control of the problem. Teachers must take on a new role in the classroom; they themselves must become part of the learning process, acting as a guide or resource for students. Once a teacher learns to become part of the learning process and students are involved in the problem, knowledge flows freely and students learn to apply their knowledge in meaningful and productive ways.

3 METHODOLOGICAL ANALYSIS OF THE STUDY PROGRAMME PROVIDED AT TUM

3.1 INTRODUCTION

The study programme analysis is carried out in accordance with the methodological framework presented in Annex 1.

The Technical University of Moldova was founded in 1964, with the initial name „Polytechnic Institute of Chisinau", based on engineering and economic specialties transferred from the State University of Moldova. In the first year of study (1964 - 1965) the university had 5140 students (of which 2085 full-time students), grouped in 5 faculties: Electrotechnics, Mechanics, Technology, Construction, Economics. The teaching staff consisted of 278 teachers, of whom only 36 had teaching and scientific degrees. In the years to come, the university has grown both quantitatively and qualitatively, becoming a major educational, scientific and cultural center.

At present, the Technical University of Moldova has a contingent of approx. 9520 students (of which 6095 full-time students), who study at 64 specialties and specializations, within 9 faculties: „Energetics and Electrical Engineering", „Mechanical and Industrial Engineering and Transport", „Computers, Informatics and Microelectronics", „Engineering and Management in Electronics and Telecommunications", „Food Technology", „Textile and Polygraphy", „Cadastre, Geodesy and Constructions", „Architecture and Urban Planning", „Economic Engineering and Business".

Postgraduate education is also organized at TUM (1442 masters and 124 doctoral students), and there are also organized staff requalification and training courses.

In its 51 years of existence, over 78,387 specialists have been trained.

A technical-scientific library with reading halls, design rooms, computer centers operates within TUM.

3.2 THE SYSTEM

TUM is a state higher educational institution in the field of engineering in the Republic of Moldova and operates under the legal framework of the national education system operating under the Constitution of the Republic of Moldova (http://lex.justice.md/document_rom.php?id=44B9F30E:7AC17731), the Education Code (http://lex.justice.md/md/355156/), the Code on Science and Innovation of the Republic of Moldova (http://lex.justice.md/index.php?action=view&view=doc&lang=1&id=286236), legislation in force, international agreements and conventions contracted by the Republic of Moldova, Charter of the Technical University of Moldova and internal normative acts (http://utm.md/administratia/acte-normative/#tab-id-1), developed in accordance with these. TUM is a non-profit university and financial autonomous institution, operating under self-management conditions, correlated with the principles of public accountability for the quality of the entire professional training, scientific

research and education services, with the efficient management of the financial means and the state patrimony.

3.3 UNIVERSITY MANAGEMENT

The executive manager of TUM is the Rector, who legally represents TUM in relations with third parties and runs the University. The Rector is the budget executor of TUM. Under the direct rector's subordination, the following are organized and operate:

a) The Secretariat of the Rectorate;
b) Department of Human Resources, Legal Services and Public Procurement;
c) Department of Informatization and Technical Information Services;
d) Department of Management, Economics and Finance, comprising: Department of Finance and Accountancy, and Planning Section.

The governing structures within TUM are:

a) University level: University Senate, Strategic and Institutional Development Council, Scientific Council, and University Administration Council;
b) The faculty council;
c) The department council;
d) The student self-government structure;
e) The Doctoral School Council.

f) The managerial positions within TUM are as follows:

g) the rector and vice-rectors - at the university level;
h) the dean and vice-dean - at the faculty level;
i) head of department / chair - at department / chair level.

The TUM Senate represents the university community and is the supreme governing authority of the Technical University of Moldova. The Senate has deliberation, decision-making and control functions and ensures the management of the University, in accordance with the legislation in force, with the principles of university autonomy, as well as with its own decisions.

Senate decisions are final and binding for all executive and administrative bodies of the University, as well as for the entire academic community. They can be modified by the Senate only.

Senate members are elected for a period of 5 years at the general meetings of faculties and departments by secret ballot. Senate members from among students and PhD students' representatives are elected at the general assembly of the respective group or representatives by secret ballot for a period of one year.

Composition of the Senate: a total of 101 people, including 59 teachers, 25 students and PhD students, 16 representatives of departments, services and centers, one member of the syndical committee of collaborators. Structure by sex: 72% men, 28% women.

The functional structures of the Senate are:

1 Office of the Senate

2 Standing committees:
- Competition Committee.
- Education and Quality Assurance Commission.
- Scientific Research and Student Creativity Committee.
- Budget, Finance and Resource Optimization Committee.
- Internationalization, Cooperation and Partnership Committee.
- Committee for social problem, extracurricular activities of students.
- Award Committee.
- Discipline, Integrity, and Ethics Committee.
- Committee for the control of the fulfillment of Senate decisions.

3 Special Committees.

Chairman of the TUM Senate is the rector of the University.

The Strategic and Institutional Development Council shall have the following competences and duties:

a) to coordinate the development of the Strategic and Institutional Development Plan encompassing the vision, mission, institution's development strategy and the main actions for a period of at least 5 years and to submit it to the Senate for approval;
b) to monitor and evaluate the efficiency of using the financial resources and to submit the educational institution's draft budget to the Senate for approval;
c) to approve the model-study contract and the amount of tuition fees;
d) to ensure the institutional management related to the intellectual property rights and technological transfer;
e) to take decisions, with the approval of the Senate, regarding:
   - development and consolidation of the institution's patrimony – decision to be approved with at least 2/3 votes of the Council members;
   - launch and closure of the study programmes – decision to be approved with at least 2/3 votes of the Council members;
   - methodology for remuneration and motivation of personnel;
   - entrepreneurship activities, public-private partnerships and cooperation with the businesses;
   - involvement in consortiums and mergence with other higher education institutions;
f) to organize and carry out the election for rector's vacancy, in line with the Institutional Regulation for organization and carrying out the elections.

The Scientific Council is the coordinating body for the research activity of the University.

Operational management of the university is ensured by the **Administration Council**, subordinated to the Senate.

The supreme governing body of the Faculties is the **Faculty Council**, which is elected for a term of 5 years and determines the development strategy of the Faculty.

The department / chair council ensures, under the coordination of its head, the operational management of the department / chair.

The Doctoral School Council ensures, under the coordination of its director, the operative management of the Doctoral School, in accordance with the institutional regulations for organizing and conducting doctoral studies.

The student self-government system is part of the university governance and has the following objectives:

a) promoting and representing the educational, professional, social, cultural, moral and economic interests of TUM students;
b) participation in the process of moral, professional, social, cultural and economic edification of students, in the spirit of the local academic tradition, in order to provide society with integral personalities;
c) representation of students in the process of institutional and financial administration as equal partners in decision-making, at any level where the student is a partner;
d) promoting the quality assurance culture in the University by participating in the process of improving the curriculum; the teaching-learning-research-evaluation process of students;
e) performace of socio-professional and cultural projects and programmes for students;
f) identifying students' specific problems and stimulating students' participation in student activity and decision-making and implementation processes;
g) establishing collaborative relations with other student organizations in the country and abroad.

3.4 FACULTY

The TUM structure comprises 9 faculties, 35 chairs, 18 departments, scientific research sections and laboratories, design and production units, computational, staff development and retraining centers, advanced technology implementation centers, scientific library, scientific publishing house, Administrative Administration Service and other structural subdivisions.

The organizational structure of TUM is established and adopted by the Senate of the University, in agreement with the Ministry of Education of the Republic of Moldova.

At TUM the studies are organized within 9 faculties: „Energetics and Electrical Engineering", „Mechanical and Industrial Engineering and Transport", „Computers, Informatics and Microelectronics", „Engineering and Management in Electronics and Telecommunications", „Food Technology", „Textile and Polygraphy", „Cadastre, Geodesy and Constructions", „Architecture and Urban Planning", „Economic Engineering and Business". The Technical College is part of the faculty of „Mechanical and Industrial Engineering and Transport".

The faculties (according to the TUM Statute) are university's didactic-scientific and administrative subdivisions, which aim at organizing and carrying out the training-education process in the first cycle (Bachelor), the second cycle (Master) and the third cycle (PhD), countinuous training courses of engineering staff, performance of educational and scientific research, innovation and development activities for one or more fields / specialties / specializations. The organizational structure of the faculty includes departments / chairs, didactic and scientific laboratories, centers and other subdivisions.

The department / chair is the functional academic unit that assures the production, transmission and capitalization of knowledge in one or more training / specialty fields.

At UTM there are branches that include special groups with the teaching of all disciplines in one of the modern languages. Within the Faculty of „Computers, Informatics and Microelectronics" there is the Francophone Branch „Informatics" and the Anglophone Branch „Computer Science and Electronics". At the Faculty of „Food Technology" there is the Francophone Branch „Food Technologies".

There are 28 specialized chairs and 7 general chairs, 8 (specialized) departments and 3 general departments, and 3 profile branches.

The training of those approx. 9520 full-time and part-time students is provided by approximately 733 teaching staff, two thirds having scientific-didactic degrees of „academician", „university professor", „university lecturer", „doctor habilitate", „doctor/PhD in science".

The University offers courses for 64 specialties and specializations in the first cycle, 62 master's degree specialties and 63 doctoral specialties, covering the needs of the national economy in engineering staff.

At UTM, studies are organized on the basis of the European Credit Transfer System (ECTS). The ECTS system facilitates the mobility of students and young specialists in the European area with the recognition of degree diplomas.

The following fundamental normative acts are at the basis of the organization of the study process: educational standards, specialty nomenclature, educational plans and study programmes.

Educational plans are approved once in 5 years by the Senate of the University and the Ministry of Education of the Republic of Moldova and are elaborated on the basis of the Framework Plan for Higher Education. The educational plan regulates: how to organize the studies within each specialty, courses to be taught (with the structure - course, laboratory, seminar, course project).

3.5 INTEGRATION OF DISADVANTAGED PEOPLE

Students with disabilities are supported by TUM through social scholarships and a number of places for students with disabilities (15% of the total budget places) are planned for admission.

Entries into the study blocks are provided with special entries for students with disabilities.

3.6 PHYSICAL ENVIRONMENT

The Technical University of Moldova has the appropriate material basis for the fulfillment of objectives. For the most efficient use of existing premises and the existing material base, the university's strategy is based on the concentration and structuring of the spaces, according to the didactic and scientific objectives of the faculties and sub-structures - chairs, research centers.

The faculties of the Technical University of Moldova are located in 11 blocks of study that are found in different districts of the city of Chisinau. The University Administration, the

Accounting, the Didactic-Methodological Department, the Department of Scientific Investigations and Technological Development, and the Human Resources, Secretariat and Public Relations Department are located in the block of study no.1.

TUM also includes the University Career Information and Guiding Center, the Center for Excellence and Acceleration in Design and Technologies „ZIPhouse", the Center for Technical-Scientific Research and Implementation of Advanced Technology „Etalon", the Didactic-Methodological and Production Center, TUM's Center for Recreation and Sport, TUM's library located within the study blocks of TUM.

3.7 STUDY PROGRAMME

The following fundamental normative acts are at the basis of the organization of the study process: educational standards, specialty nomenclature, educational plans and study programmes.

The study process is carried out in two cycles:

- cycle I – bachelor's degree studies;
- cycle II – master's degree studies.

Higher education corresponds to a certain number of ECTS transferable study credits: the duration of the bachelor's degree studies is 3-4 years and corresponds to 60 credits for one year of study; the duration of the master's degree studies is 1-2 years and corresponds to 60-90-120 study credits.

Higher education is organized through full-time and part-time education. Master's degree studies are usually provided through full-time education. The duration of studies in part-time education is one year longer than in full-time education.

The year of study in higher education starts on September 1 and has a duration of up to 42 weeks, divided into two relatively equal semesters, which includes two examination sessions and internships. Every semester the students attend 6 courses.

The study programme at each course consists of:

- The course, where the teacher explains the theoretical material according to the study programme, which is approved at the chair meeting and the faculty council.
- Seminar / practice where students solve problems (seminars / practical classes may be missing at some courses).
- Laboratories, where students receive individual tasks, have to solve them and draw up a report.

During 4 years of study, at some courses, students have 5 annual projects, where they have to solve a specific problem.

Starting with year 2, students have a summer internship when they are sent to companies, and they have a bachelor's degree internship in the last year.

Bachelor's degree studies are completed with a bachelor's degree exam and a bachelor's degree project / thesis.

Graduates who have passed the bachelor's degree exam and defended the bachelor's degree thesis are awarded the bachelor's degree title in the general profile/ field of study and are awarded the bachelor's degree diploma. Graduates who have not passed the bachelor's degree exam receive, upon request, a certificate.

Within UTM there are many study programmes covering various fields of engineering and engineering activities (Annex 2).

3.8 PEDAGOGICAL TRAINING LEVEL

As a result of studying the experience of the partners from the EU countries and the experience gained in the field of continuous training, the **University Center for Continuous Training** (CFC) was established, which is the functional academic unit of TUM providing continuous training of the specialists in the business environment and teaching staff in higher education and vocational education and training.

Continuous training activity at TUM takes place in the following main directions:

a) continuous training of teachers in institutions of vocational education and training (secondary technical and vocational education and training, post-secondary technical and vocational education and training, post-secondary non-tertiary technical and vocational education and training, higher eduction);
b) continuous training of managers, engineers, technicians and skilled workers at the request of economic agents;
c) training and retraining of unemployed and jobseekers;
d) organization of extracurricular courses for TUM students in the field of management and development of professional career, and orientation courses for high school graduates.

The Structure of the Center for Continuous Training includes:

a) the Department of Continuing Training of Teaching Staff from the Technical Institutions;
b) the Continuing Training Department of the staff in the national economy with specialized centers;
c) thematic and multidisciplinary courses for specialists' training at the request of economic agents and individuals interested provided within the ICT Excellence Center, Center for Excellence and Acceleration in Design and Technologies in Light Industry;
d) Modern language courses.

The Center for Continuous Training offers the following educational services:

a) short thematic training courses;
b) training / specialization courses;
c) multidisciplinary training / specialization courses;
d) re-qualification studies based on higher or secondary specialized studies to conduct a new professional activity;
e) professional re-qualification studies based on higher or secondary specialized studies to

obtain a new qualification.

The Department of Continuing Training of Teaching Staff provides educational services in the following areas:

a) initial training and continuous psycho-pedagogical training of the teachers from the institutions of secondary technical and vocational education and training, post-secondary technical and vocational education and training, post-secondary non-tertiary technical and vocational education and training, higher eduction;
b) courses for improving the pedagogical skills, thematic seminars for the managers of the institutions of secondary technical and vocational education and training, post-secondary technical and vocational education and training, post-secondary non-tertiary technical and vocational education and training;
c) counseling and support in developing the curriculum, teaching materials, textbooks for secondary and post-secondary technical and vocational education and training.

4 CROSS-CASE ANALYSIS

4.1 INTRODUCTION

The Technical University of Moldova, the Aalborg University, and the University of Gloucestershire were analyzed, according to the methodological framework presented in Annex 1: System Level, University Management Level, Faculty Level, Integration of Disadvantaged Students, Learning Environment, Pedagogical Training.

4.2 DATA COLLECTION

Here is the process of data collection within the university discussed; What data was collected, how, where, where are they stored, data access - any other actions related to data collection.

Table 3: Data collected

The methodological level of the analysis	Data sources	Relevant data	Reflections
System	http://www.edu.gov.md http://lex.justice.md/document_rom.php?id=44B9F30E:7AC17731 http://lex.justice.md/md/355156/) http://lex.justice.md/index.php?action=view&view=doc&lang=1&id=286236 Government Decision of the Republic of Moldova no. 223 of 21.03.2011	- Constitution of the Republic of Moldova - The Education Code - The Code on Science and Innovation of the Republic of Moldova - Charter of the Technical University of Moldova Government Decision no. 983 of 22.12.2012 „On the way of financing the state higher education institutions under conditions of financial autonomy”.	TUM operates under the legal framework of the national education system operating under the Constitution of the Republic of Moldova, the Education Code, The Code on Science and Innovation of the Republic of Moldova, the legislation in force, the international agreements and conventions contracted by the Republic of Moldova, the Charter of the Technical University of Moldova. TUM operates under the conditions of university autonomy, in its own premises, with its own budget according to the legislation in force.

The methodological level of the analysis	Data sources	Relevant data	Reflections
University management	http://utm.md/administratia/ http://utm.md/administratia/senatul/ http://utm.md/administratia/biroul-senatului/ http://utm.md/administratia/consiliul-de-administratie/ http://utm.md/subdiviziuni-universitare/		The governing structures within TUM are: a) University level: University Senate, Strategic and Institutional Development Council, Scientific Council, and University Administration Council; b) The faculty council; c) The department council; d) The student self-government structure; e) The Doctoral School Council. The managerial positions within TUM are as follows: a) the rector and vice-rectors - at the university level; b) the dean and vice-dean - at the faculty level; c) head of department / chair - at department / chair level.
Faculty	http://utm.md/despre-utm/organigrama-utm/ http://utm.md/subdiviziuni-universitare/		The organizational structure of TUM includes the following components: faculties; departments / chairs; a doctoral school; research and / or design centers and laboratories; consulting centers; publishing house; student club; sports club; the center for continuous training of human resources; microproduction and service provision units; technology transfer incubators; other entities for production and transfer of knowledge and technology activities; administrative services.
Studies	Nomenclature of professional training areas and specialties for training in higher education institutions, 1st	The following fundamental normative acts are at the basis of the organization of the study process:	There are 28 specialized chairs and 7 general chairs, 8 specialized departments and 3 general departments and 3 profile branches.

The methodological level of the analysis	Data sources	Relevant data	Reflections
	cycle. FRAMEWORK PLAN for higher education (1st cycle – Bachelor's degree, 2nd cycle – Master's degree, Integrated studies, 3rd cycle - Doctorate)	educational standards, specialty nomenclature, educational plans and study programmes. Bachelor's degree programmes are organized by training area (specialties) in accordance with the Nomenclature. The Framework Plan is a component of state educational standards in higher education and sets out the general principles for organizing and conducting the study process in higher education institutions.	The University offers courses for 64 specialties and specializations/programmes in the first cycle, 62 master's degree programmes and 63 doctoral degree programmes, covering the needs of the national economy in engineering staff. The programmes for each course are discussed and approved within departments and then at the faculty council at the beginning of each academic year.
Integration of disadvantaged students			Students with disabilities are supported by UTM through social scholarships and 15% of budget places for students with disabilities are planned for admission. Entries into study blocks are provided with special entrances for students with disabilities.
Learning environment	http://utm.md/despre-utm/patrimoniu/ Decision of the Soviet of Ministers of the USSR no. 209 of 13 March 1964 on the organization of the Polytechnic Institute of Chisinau	The University has 11 blocks of study and centers: the Center for Excellence and Acceleration in Design and Technologies „ZIPhouse", the Center for Technical-Scientific Research and Implementation of Advanced Technology „Etalon", the Didactic-Methodological and Production Center,	The Technical University of Moldova has the appropriate material basis for the fulfillment of objectives. For the most efficient use of existing premises and the existing material base, the university's strategy is based on the concentration and structuring of the spaces, according to the didactic and scientific objectives of the faculties and sub-structures - chairs, research centers.

The methodological level of the analysis	Data sources	Relevant data	Reflections
		TUM's Center for Recreation and Sport, TUM's library located within the study blocks of TUM.	
Study programme	Education Law no. 547-XIII of July 21, 1995 Law no. 142-XVI of July 7, 2005 http://utm.md/procesul-de-studii/ http://utm.md/procesul-de-studii/licenta/ http://utm.md/procesul-de-studii/masterat/	The study process is carried out in three cycles: 1st cycle - bachelor's degree studies; cycle II - master's degree studies; cycle III - doctoral studies. The duration of the bachelor's degree studies is 3-4 years and corresponds to 60 credits for one year of study; the duration of the master's degree studies is 1-2 years and corresponds to 60-90-120 study credits. Bachelor's degree studies are organized through full-time and part-time education.	The year of study in higher education has a duration of up to 42 weeks, divided into two relatively equal semesters, which includes two examination sessions and internships. Every semester the students attend 6 courses and have a project at one or two courses in one year of study. The study programme at each course consists of direct and indirect contact hours, including theoretical hours, seminars and laboratories. Bachelor's degree studies are completed with a bachelor's degree exam and a bachelor's degree project / thesis.
Pedagogical training	http://utm.md/subdiviziuni-universitare/departamente-si-servicii/formare-continua/ Senate's decision of 22.04.2008	The Center for Continuous Training is a diversified structure of continuous training with specialized centers and with continuous training programmes: thematic courses of short-term training / specialization, multidisciplinary training / specialization courses with a duration of 72-500 hours, re-qualification courses based on higher or	Teachers who do not have the title of associate professor are obliged to attend the module of Psychopedagogy within the University Center for Continuous Training.

The methodological level of the analysis	Data sources	Relevant data	Reflections
		specialty studies for a new professional activity of 500-1000 hours, vocational re-qualification studies based on higher or secondary specialist studies to obtain a new qualification of more than 1000 hours.	

4.3 DATA ANALYSIS

Based on this methodology the teams collected and analysed the data and produced 6 (7) benchmark reports on study programmes and 4 benchmark reports on pedagogical training programmes.

Table 4: Cross-case analysis

Criteria, properties, indicators	TUM	AAU	UoG
L1: System level	It operates on the basis of the legal framework of the national education system operating under the Constitution of the Republic of Moldova, the Education Code, The Code on Science and Innovation of the Republic of Moldova, the legislation in force, the international agreements and conventions contracted by the Republic of Moldova, the Charter of the Technical University of Moldova.	- The Danish Agency for Higher Education deals with tasks in the general higher education sector, including student grants and loan schemes. - The Danish Accreditation Institution accredits higher education institutions. - The main positions that a university teacher can occupy is an assistant professor, a researcher, an associate professor, a senior researcher, a	The UoG, according to the Qualifications Framework for higher education, regulates student mobility conditions during the years of study. This is important in helping to increase the wider international experience. It is also important to note that the UoG conforms to the QAA (Quality Assurance Agency) for higher education, based on which the university accreditation takes place. It is worth mentioning that the opinion of several informal quality

Criteria, properties, indicators	TUM	AAU	UoG
		professor. - There is no fee for students from the EU / EEA and AAU partner universities. - As an international AAU student with a residence permit for Denmark, he/she is eligible for free medical assistance - just like any Danish citizen.	assurance agencies is important because their opinion is taken into account in the labor market. Therefore, UoG tries to adapt its courses according to their recommendations.
L2: University management level	1. Senate. The Senate represents the university community and is the supreme governing authority of the Technical University of Moldova. The Chairman of the Senate is the Rector of UTM. There is also the first Vice-Rector for Quality Management, Vice-Rector for Scientific Research, Vice-Rector for Financial Affairs, Vice-Rector for Continuing Education and International Relations, Vice-Rector for Administrative Service and Capital Constructions. 2. The Office of the Senate, which is responsible for managing the implementation of the Senate's	- The status describes the general purpose of Aalborg University and provides for the establishment of the management and organization. - The AAU Strategy for 2016-2021 defines the overall mission and vision of the university in the following areas: Research; Problem-based learning; Education; collaboration. - The Board of the University is the highest authority of the Aalborg University (AAU), the University Rector is responsible for every day university management. - The Rector / Vice-Rector and the AAU Director, deans, the director of the library.	1) The University Executive Committee. 2) The University is divided into faculties. 3) Students belong to a faculty.

Criteria, properties, indicators	TUM	AAU	UoG
	decisions. 3. The Administration Council. The operative management of the university is ensured by the Administration Council, subordinated to the Senate 4. The faculty councils, which ensure the operative management of the faculties.		
L3: Organization by Faculties / Departments	The TUM structure comprises 9 faculties, 35 chairs, 18 departments, scientific research sections and laboratories, design and production units, computational, staff development and retraining centers, advanced technology implementation centers, scientific library, scientific publishing house, Administrative Administration Service and other structural subdivisions. The faculties (according to the TUM Statute) are university's didactic-scientific and administrative subdivisions, which aim at organizing and carrying out the training-education process in the first cycle (Bachelor), the second cycle (Master) and the third cycle (PhD), countinuous	- The Academic Council has the right to express its opinion on all academic aspects of importance to faculty / SBI activities and has the obligation to discuss academic issues with the Rector. - Aalborg University doctoral schools are affiliated to the four AAU faculties. - Academic environments at faculties are organized in departments, schools and research centers. - The division into groups reflects the department's research profile and decentralized responsibility for research, planning and teaching.	Each faculty is responsible for a specific area, offering university and postgraduate courses and research activities for different areas. In addition to designing and offering various study programmes, faculties are also responsible for conducting research and marketing activities in various fields.

Criteria, properties, indicators	TUM	AAU	UoG
	training courses of engineering staff, performance of educational and scientific research.		
L4: Studies / programmes	Educational programmes are discussed and approved within the departments and then at the faculty council at the beginning of each academic year.	A school from Aalborg University (AAU) is a professional community that consists of one or more study councils. The tasks of the Study Council are to discuss and approve the programmes, guiding, and ensuring quality.	Courses can be easily reviewed in each academic year. The study council gathers and makes decisions about improving disciplines. These procedures do not require some approval at a higher level. Of course, there is a thin line separating the slight review from the in-depth review of topics, which already requires approval at a higher level.
L5: Integration of students with disabilities	Students with disabilities are supported through social scholarships and admission at TUM. TUM's blocks of studies provide for special entries that facilitate access to the study blocks.	The Student Counseling Service is an independent institution offering counseling related to the study process, psychological and social assistance.	UoG has a modern environment tailored to meet the needs of any student. Thus, for disadvantaged students, called people with special needs, UoG provides absolute accessibility to any of the study blocks providing the following facilities: 1) All doors in the hallway are automated with a button that is located at a lower level accessible to people moving on the wheelchair. 2) Sanitary rooms offer special facilities for people with disabilities. 3) Doors that can be easily opened by people with

Criteria, properties, indicators	TUM	AAU	UoG
			disabilities are provided. 4) In the UoG, "Student Aid Areas" are used to provide services to disabled students. A person who is attached to the student with special needs can also be offered.
L6: Learning environment / Infrastructure	The Technical University of Moldova has the appropriate material basis for the fulfillment of objectives. For the most efficient use of existing premises and the existing material base, the university's strategy is based on the concentration and structuring of the spaces, according to the didactic and scientific objectives of the faculties and sub-structures - chairs, research centers. The University has 11 blocks of study and centers: the Center for Excellence and Acceleration in Design and Technologies „ZIPhouse", the Center for Technical-Scientific Research and Implementation of Advanced Technology „Etalon", the Didactic-Methodological and Production Center, TUM's Center for Recreation and Sport, TUM's library located within the study blocks	- Aalborg University (AAU) has blocks of study located in Aalborg, Esbjerg and Copenhagen. - Researchers, professors, PhD students and students have access to the information facilities of the university. - UniFitness Aalborg is equipped with professional fitness equipment.	UoG has campuses located in Gloucestershire (Oxstalls) and Cheltenham (The Park). The Cheltenham campus is located in a former park so it is very green and aesthetic. There are several buildings on the Cheltenham campus. We visited Elwes (the largest building) and the Fullwoods building (a historic building). There are also some facilities on the campuses - canteen, pray room, first aid cabinets, sanitary facilities.

Criteria, properties, indicators	TUM	AAU	UoG
	of TUM.		
L7: Study programme	The duration of the bachelor's degree studies is 3-4 years and corresponds to 60 credits for one year of study. The year of study in higher education has a duration of up to 42 weeks, divided into two relatively equal semesters, which includes two examination sessions and internships. Every semester the students attend 6 courses and have a project at one or two courses in one year of study. The study programme at each course consists of direct and indirect contact hours, including theoretical hours, seminars and laboratories.	The teaching method is known as problem-based learning, which means that every semester students work in a group on a project.	The study programme lasts for three years with the four-year study option. This means that students can do an internship in the industry after the second year of study. After that, they return to the university to complete their final year of study. This is optional but recommended as it offers students the opportunity to have a year of experience indicated in their CV after graduation.
L8: Level of pedagogical training	Teachers who do not have the title of associate professor are attend to pass a module of psycho-pedagogical training in the amount of 60 transferable study credits	- Learning Lab that assures the development of teachers' teaching / learning skills at Aalborg University. - Academic English at a high level; Mandatory Certification for English language knowledge(assistant professors).	Teachers who teach must be certified by the HEA (Higher Education Academy)

Table 5: Reflections

	Common patterns	Variations
L1: System level	1. The study process in higher education is based on the European Credit Transfer System (ECTS). 2. Universities operate under conditions of university autonomy. 3. Accreditation of study programmes is done by Accreditation and Attestation Institutions, or Quality Assurance Agencies.	In UoG teachers in order to teach must be HEA (Higher Education Academy) certified
L2: University management level	Governance of Universities is done by the Rectors, Vice-Rectors and the Council / Senate / Executive University Committee	Financial autonomy of faculties, departments, schools.
L3: Organization by Faculties / Departments	The academic environment within faculties is organized in departments, chairs, centers.	At Aalborg University, the faculties also include schools that are professional communities and comprise one or more study boards, managing related study programmes. The school is run by a programme director, assisted by a study advisory board. The task of the study board is curriculum development, student guidance, quality assurance, etc. Within departments there is a great emphasis on science, where departments contain research centers on different themes. Teachers are actively involved in the research process, where the teaching workload is distributed according to criterion 60 (teaching) +40 (research). Financial autonomy of departments.

	Common patterns	Variations
L4: Administrative council	The curricula for each discipline are reviewed and approved by a special committee at the beginning of each academic year.	Teacher autonomy At Aalborg University, teachers have a freedom in organizing the course, where the main purpose is to achieve the objectives of the course.
L5: Integration of students with disabilities	Special entries that ease access to blocks.	1. The existence of the psychological counseling center. 2. Developed infrastructure for people with disabilities.
L6: Infrastructure	Blocks of studies, including faculties, departments, research centers, etc.	The study areas of the departments are focused on team work.
L7: Study programme	Educational plans are discussed and fixed by a specialized board.	1. At Aalborg University and UoG, the teaching methodology is based on the problem. 2. The Aalborg University has a freedom in changing the subjects taught, where the main purpose is to ensure the basic objectives of the course.
L8: Level of pedagogical training Criterion 1. Certification of teachers	1. Teachers who teach at TUM have to attend a psycho-pedagogical training module in an amount of 60 transferable study credits to get a certificate of psycho-pedagogical training. 2. Teachers within the UoG must be certified by the Higher Education Academy. 3. Teachers at Aalborg University must attend the introductory course in PBL.	Aalborg University requires mandatory English language certification (C1 level) for teachers who teach in English. This objective is achieved through a specialized center, called LACS - Center for Language and Communication Services.

5 "SOFTWARE ENGINEERING" STUDY PROGRAMME

5.1 INTRODUCTION

In 2017 it is planned to start the new study programme - Software Engineering (SE) within the Department of Software Engineering and Automatics of the Faculty of Computers, Informatics and Microelectronics, Technical University of Moldova.

Software Engineering (SE), along with Information Technology, is part of the science of information processing methods and tools (computing) to solve specific problems related to the organization of human activities. In relation to Information Technology, the Software Engineering programme is a more theoretical and oriented towards specialists training, whose core mission is the development of software production models and techniques, but the scope of which extends to both system infrastructure and organizational and information aspects of companies.

The bachelor's degree programme „Software Engineering" (field of System Engineering and Computers) is geared towards training engineers with a qualification corresponding to Level 6 of the National Qualifications Framework / European Qualifications Framework (NQF / EQF).

Table 6. Essential characteristics corresponding to level 6 of the NQF

Level	**Bachelor's degree (cycle 1) - Level 6 of the EQF / NQF**
Duration of studies	4 years
ECTS study credits	240 credits
Form of organization	full-time education
Access conditions	BAC diploma, Specialized secondary school diploma
Preconditions	Achievement of the of pre-university learning outcomes
Internships	Mandatory (25 ECTS)
Examination and evaluation rules	Current-formative evaluation; final - sumative are mandatory; The current-formative evaluation is done through seminars, internships, self-evaluation and evaluation of individual and / or team work; The methodology of final-summative evaluation is geared towards evaluating learning outcomes expressed in terms of competencies.
Final evaluation method	Bachelor's degree exam, defending of the bachelor's degree thesis
Certification	Bachelor's degree
Title awarded	*BSc in engineering*
Rights for graduates	Apply for master's degree programmes; Apply for continuous training programmes; Employment.
Body responsible for authorizing programmes	Ministry of Education, ANACIP

The programme will last 4 years, 8 semesters. It will be based on the Aalborg University study model and will be of the 4 + 1 type: 4 courses per semester of 5 credits each, and a project of 10 credits besides courses.

Problem-based learning involves active collaboration with the private environment for the training the specialist in the field of software engineering, thus providing for a half-yearly interaction with companies (when defining project problems).

There will be a focus on a new approach to teamwork and interdisciplinarity.

Organizing the programme in a PBL manner induces a well-defined topic to each semester and a supervisor (tutor) who coordinates the activities of teachers and students.

5.2 GENERAL DESCRIPTION OF THE PROGRAMME

The primary purpose of the study programme is driven by the need for well-trained engineers in line with the field of professional training, capable of delivering advanced software solutions and innovations applied to various areas of human activity.

The development of the educational plan aims at achieving student-centered learning, with the help of problem-based learning methodology and using active learning principles.

Table 7. General description of the programme

General field of study:	061 Information and communication technologies
Field of professional training:	0613 Development of programme products and applications
Study programme:	0613.3 Software engineering
Total number of ECTS study credits:	240
Title awarded:	BSc in engineering
Certification:	Bachelor's degree
Admission basis:	Baccalaureate diploma or an equivalent study document; higher education diploma
Language of instruction:	Romanian, Russian, English
Form of organization of education:	full-time education

The professional competencies to be developed by the study programme are determined by the definition of the Software Engineering study programme in accordance with the *ACM standard*, *the Association for Computing Machines* and the *IEEE Computer Society*, and involve a mix of skills to solve some problem categories outlined by *key competencies* regarding:

- the scientific and engineering fundamentals of information technologies;
- the organizational and informational aspects of the systems;
- application technologies;
- software development methods and technologies;
- architecture and infrastructure of computing systems.

Each semester has a well-defined theme and a supervisor (tutor) who coordinates the activities of teachers and students:

- Problem based learning of science, technology and society
- The engineering and scientific basics of computing
- The basics of applications development
- Formal languages and compilers
- Networks and security
- The Internet of Things (IoT)
- Information systems
- Bachelor's degree project.

The value of the PBL method applied in the Software Engineering study programme is based on the elaboration and solving of a project in a group, followed by a defence of its results, complemented by an examination of the disciplines studied according to the semester plan. This involves motivating factors for students, combining teamwork for problem solving (practical, theoretical activities) that, according to studies, improve the ability to reflect and communicate.

The examination committee will also include an external examiner, selected based on specific performance criteria. This factor increases the quality and transparency of evaluation, being an important element of higher education.

Teamwork allows students to learn to work in a group, and the synergy effect fills the gaps in students' knowledge. It is an effective learning method, activates past knowledge, intensifies learning especially where the problem-based approach applies in a relevant context.

Forms of organization of the study process combine judicially the direct contact activities between the teacher and the students. The optimization of students' training activities is done by working on semestrial projects, practical works / seminars and is ensured by:

- Organization of consultations;
- Carrying out projects by addressing current issues;
- Monitoring the results obtained in projects with the mentioning of the best results;
- Keeping the training activity under control through the current evaluation of teaching activities through current evaluations;
- Conducting and participation in public lectures;
- Performing optional subjects, etc.

5.3 PROGRAMME STRUCTURE

The unique theme concludes the modules of the semester (courses / lectures, seminars, other activities), giving them a common sense, a motivation to study, to which is added the semester project, which is allocated 10 ECTS credits (out of 30 per semester) and the other recommended subjects - other 20 credits. The approach allows the decongestion of the study programme from the modules offered by the department (compulsory or at free choice) and the offering of a greater academic freedom for students in projects, in the spirit of PBL principles.

Table 8. General characteristics of the SE educational plan

Requirements of the framework plan	PBL/SE
the theoretical hours / practical applications ratio	28/72
the length of internships	45 weeks (included in study semesters)
number of course units / optional modules	11
number of projects	8 (including the bachelor's degree project)
the number of exams per semesters of study	5
the number of transferable credits for one semester / year	30/60

The educational plan, by structure and content, corresponds to the provisions of the Framework-plan for Higher Education (Cycle I – Bachelor's degree):

- the disciplines are divided into categories: fundamental, training of general skills and competences, of socio-humanistic orientation, compulsory and optional, and disciplines at free choice;
- the calendar plan provides 30 weeks of study per year, divided into two semesters with 15 weeks each, two examination sessions each lasting three weeks at the end of semesters and three holidays, including Easter holidays;
- forms of evaluation include exams, tests, and semestrial projects. The total number is five;
- the educational plan provides for the allocation of ECTS credit points for each course unit. Thus, 1 credit point is allocated for 15 hours of direct contact plus 15 individual hours of work. Training within one year allows for the accumulation of 60 credits, and upon completion of the programme - 240 credits.

Table 9. Formative structure of the SE educational plan

Formative structure, degree of compulsoriness	Credited components	Framework-plan	PBL/SE
		%	
Compulsory	**Fundamental** course units / modules (F)	20 -35	29
Compulsory	Course units / modules of training **general** skills and compentences (G)	5 - 10	6
Optional	Course units / modules of **socio-humanistic** orientation (U)	5 - 10	6
Compulsory and optional	Course units / modules of orieantation towards the basic **speciality** (S)	30 – 40	58 (including internships 20 ECTS)
Compulsory	*Internships*	*10 - 12*	*14,6 (35 ECTS)*

The teaching-learning process is carried out based on the disciplinary curriculum, the academic courses, and the respective didactic project. The holder of the discipline has an important role in organizing the training process within each subject. Taking into account the provisions of the educational standard and the place of the discipline in the educational plan, the holder performs the following activities:

- determines the role, objectives and tasks of the discipline, indicating the knowledge, skills acquired by the students;
- elaborates the themes and the content of the lectures, seminars / laboratory works, tasks for individual work (verification papers), themes and content of the annual projects, subjects for the examination / colloquia;
- establishes the generic ties of the discipline with other precursor and subsequent disciplines, coordinates and guides the theme of individual works as a component part of the bachelor's degree project;
- sets out methods and means of assessment, criteria for assessing students' knowledge.

6 ACTION PLAN

6.1 INTRODUCTION

In 2017 it is planned to start the new study programme - Software Engineering (SE) within the Department of Software Engineering and Automatics of the Faculty of Computers, Informatics and Microelectronics, Technical University of Moldova.

In order to perform the enrollment to the specialty of September 1, 2017, the Study Programme needs to obtain provisional authorization for its operation, so the Educational Plan must be developed in accordance with the *Nomenclature of Professional Training and Specializations* and the Framework Plan. When developing educational plans, it is necessary to make orientation towards acquiring the ***learning outcomes*** and skills training provided by the National Qualifications Framework on cycles and by general fields of study / professional training fields.

It is anticipated that the new study programme will implement problem-based learning methodology and that the study model was taken from the Aalborg University.

6.2 STEPS TO BE TAKEN

In order to start the educational process based on the new study programme Software Engineering, the following steps need to be taken:

Step 1	***Inclusion of the new specialty in the Nomenclature of Professional Training Areas and Specialties for the Training of Staff in Higher Education Institutions, 1st cycle***
Step 2	Elaboration of the educational plan
Step 3	Approval of the study programme at: - Department / Chair - The faculty - The TUM Senate
Step 4	Internal and external evaluation of the study programme
Step 5	Obtaining authorization for provisional operation
Step 6	Advertising the new study programme
Step 7	Admission to the study programme

1. The Software Engineering specialty is a new specialty that is not in the *Nomenclature of Professional Training Areas and Specialties of 2005*, which is why it must be introduced and approved in the new *Nomenclature of Professional Training Areas and Specialties of 2017*.

2. Elaboration of the educational plan for the training of specialists in Software Engineering according to the provisions of the *TUM Regulation regarding the organization of studies based on the National Study Credit System*, having regard to the *Regulation on the organization of studies in higher education based on the National Study Credit System*, so that the programme is linked to national and international standards of training of specialists in the field and corresponds to the Framework Plan.

3. Approval of the study programme within the Department of Software Engineering and Automatics; Faculty of Computers, Informatics and Microelectronics, and TUM Senate.

4. The internal evaluation (self-evaluation) of the study programme to get the authorization for provisional operation shall be carried out autonomously by the Technical University of Moldova.

The external evaluation of the study programme for authorization for provisional operation is done by the National Agency for Quality Assurance in Professional Education (ANACIP) and is based on the analysis of the self-evaluation report of the programme.

5. The external evaluation committee shall verify, through a visit to the applicant institution, the fulfillment of the requirements with respect to accreditation standards, evaluation criteria and performance indicators, approved by ANACIP. If all accreditation standards "meet the requirements", the Governing Board of ANACIP proposes the **authorization for provisional operation** of the study programme for a period of five years.

The final decision on the authorization or non-authorization for provisional operation is adopted: by Government Decision, at the proposal of the Ministry of Education, based on the decision of the Governing Board of ANACIP.

6. Advertising of the new study programme through leaflets, the website of the Technical University of Moldova, social networks.

7. On the basis of the Order of the Ministry of Education of the Republic of Moldova on the organization of admission of 2017, admission will be made to the Software Engineering specialty.

6.3 CHANGING CONTENT

Step 1	**Elaboration of the educational plan**
Step 2	Identifying companies. Developing curricula.
Step 3	Preparing the infrastructure for teaching based on PBL methodology, using active learning methods
Step 4	Training teachers to teach based on PBL methodology

Step 1. Elaboration of the educational plan corresponds to the Framework Plan and is based on a linear progress determined by relations at the semester level rather than at the level of disciplines. Each semester has a well-defined theme and a supervisor (tutor) who coordinates the activities of teachers and students:

- Learning based on science, technology and society problems
- Engineering and scientific basis of calculation
- Basics of application development
- Formal languages and compilers
- Networks and security
- The Internet of Things (IoT)
- Information systems
- Bachelor's degree project.

The unique theme concludes the modules of the semester (courses / lectures, seminars, other activities), giving them a common sense, a motivation to study, to which is added the semester project, which is allocated 10 ECTS credits (out of 30 per semester) and the other recommended subjects - other 20 credits. The approach allows the decongestion of the study programme from the modules offered by the department (compulsory or at free choice) and the offering of a greater academic freedom for students in projects, in the spirit of PBL principles.

Step 2. Identifing companies that will assume to provide knowledge transfer support at the content level, teachers and internships for students.

Step 3. Preparing infrastructure for teaching based on the PBL methodology consists of purchasing equipment and preparing rooms, which will be team work-oriented.

Step 4. Teachers to provide the study programme will attend the introductory course in PBL.

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7 CONCLUSION

The education system in the Republic of Moldova as a whole, and higher education in particular, is a legacy of the Soviet education system, which is based on the classical teaching approach.

Over the last two decades, a considerable effort has been made to adjust our national education system, in line with international standards, especially European ones.

Today, Moldova's higher education is part of the Bologna process, which means that our higher education is compatible with the European one, so that students and teachers have the opportunity to participate in mobilities under the Erasmus or Erasmus+ programmes. However, it would be inappropriate to say that the Moldovan educational system fully corresponds to the modern European education systems because the study process is not adapted to the needs of each individual student.

Therefore, the primary objective of the project to develop student-centered and problem-based programmes is achieved through the Software Engineering study programme. It is a programme developed according to the models studied at partner universities of the project but also corresponds to the national framework plan.

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Annex 1: Analysis methodology

Each Task Force Team will store all collected data files in the project intranet https://pblmd-moodle.samf.aau.dk/. Task Force leaders are to make sure all data files and documents are stored in the project intranet.

1. Institutional fit-for-purpose

This part is concerned with exploring the relationship between internal university structures and study programmes, incl., how study programme development and support are integrated throughout the entire university. The cohesion of study programme development and support will be examined at university management, faculty/department, as well as the study board levels. Issues related to the integration of disadvantaged group of students as well as to available physical environment will be explored.

Each Task Force Team will employ this part of the methodology to develop a benchmark understanding of how student-centred teaching and learning at EU partner universities is imbedded into and related to overall institutional structure and later to explore the same relationship, fit-for-purpose at own universities.

NOTE: the questions below are separated into 6 levels; there might be an overlap between the levels. It is important when asking a question to consider its relationship with other levels and impact it might have on other areas within and across the levels.

System level:

- Does the University have power/authority to accredit/validate its own degrees? If so go to section below.
- If not what is the external process?
- What is the legal status of the accrediting body? How is it composed? Does it publish a guide and criteria for accreditation? Is this publicly available? Ask for a copy and include an analysis of key elements in your report.
- Does accreditation happen periodically? Is there a fast track for new degrees/areas of study? How long does the normal process take? Is accreditation institutional or subject based?
- How is it regarded by stakeholders?
- Is there a national system of Quality Assurance? Is it independent of accreditation? What is the legal status of the QA body? How is it composed? Does it publish a code of practice? If so obtain a copy or access and include an analysis of key elements in your report.
- How does the national QA body influence curriculum development and internal quality assurance? How is it regarded by stakeholders?
- Are there national subject benchmarks or equivalent which programmes have to address?[1]

[1] In the UK, and probably elsewhere, there are certain guidelines and constraints exercised from outside the HEI. These might be professional bodies (e.g. in the case of Law in England, where any qualifying Law degree has to be

- Are there any relevant guidelines or benchmark statements provided by government agencies which constrain or otherwise affect the delivery of programmes? Explain whether these benchmarks refer to the content, delivery or assessment of the programme.
- Which professional bodies have some input into the validation or oversight of the programmes and how are these processes carried out?
- Which external validating agencies are involved in the design of the programmes and how is this achieved?
- What are the arrangements for dual awards or professional recognition?

University Management Level:

- What is the governance, management and organizational structure of the university?
- Is there a University institutional strategy which incorporates a curriculum strategy with a focus on student centred learning or is there a separate curriculum (learning and teaching)strategy? Is there an institutional commitment to innovative learning and teaching, greater use of ITC, a focus on employability, internationalisation of the curriculum? Language acquisition, inter-cultural skills? Obtain or access the documents and include an analysis in your report?
- What is the key university structure/committee responsible for student-centred teaching and learning? What are its terms of reference? What is its membership?How often does it meet? Are there provisions for fast tracking urgent curriculum development? What delegated powers does it have and to which body is it accountable? Does it produce regulations/good practice guides for curriculum proposals? What is the relationship of this body to Faculties/ Schools/ Departments / Colleges in the University?
- Is there a separate committee and/or office for internal quality assurance and enhancement? What are its responsibilities and how is it resourced(number and level of staff full/part-time, academic or administrative?
- At what level in the University curriculum proposals can be initiated and possibly a definition of the various bodies to be sure that there is a consistent understanding of terms? If necessary, for each university create a Glossary of terms and respective provide definitions.
- What other bodies have an influence on curriculum development and approval e.g. Is there a requirement for a business case for all new programmes? Would the business case have to demonstrate how the proposal fits the University strategic plan? Which committee or senior manager needs to approve the business plan? Would service departments such as e.g. Finance, Estates, Library, Careers, Legal, Ethical expect/require to be consulted?]
- What learning and teaching and assessment approaches are used at the university? What differences are there between and/or within different subject areas/faculties?
- Is there an institutional graduate school? Does it have responsibility for both second and third cyles? What are its terms of reference? How does it relate to other bodies

validated by the Law Society); government agencies (e.g. the subject benchmark statements provided by HEFCE); or other validating agencies (e.g. EDAMBA etc.). This can be significant because these agencies sometimes dictate the curriculum and the assessment style (e.g. insisting on exams).

responsible for curriculum approval? [You might want to develop this with more on Doctoral Schools/Programmes]

- What public/published information is available on all aspects of the University curriculum policy and content? Is this available on the web site with open access? The content should be reviewed as part of the benchmarking.
- Do descriptions of programmes and modules contain clear statements of intended learning outcomes?Learning methods, assessment and assessment criteria? Do programme descriptions indicate potential employment routes post-graduation? Who monitors/is responsible for ensuring this?
- Are academic staff required to have a formal 'teaching' qualification? If so what bodies offer/validate the qualification? What formal requirements are there for continuing staff development and training? How is this monitored and assessed? Which body in the University has responsibility for this? Is the University Human resource department engaged in academic staff training and development? What standards are followed in pedagogical training of academics? Are there national common guidelines, pedagogical standards/methodologies to be followed? What training courses are organized for staff teaching skills development?
- How are students represented at the university level? What role do students play in the governance, management, organisation of the University? Note: it is important to understand how the students are appointed/ nominated to the relevant bodies and how they report back to their constituency.
- What KPIs are typically used at university level in relation to resourcing teaching and learning (such as, SSRs (staff student ratio); spend per student on library resources; time allowances for teaching and assessment; average class size etc)?
- What is the role of the students' union in the student-centred teaching and learning?
- How is student-centred teaching and learning supported by the university's mission statement?
- How, if at all, is student-centred teaching and learning promoted throughout the university?
- What is the role of continuous professional development (CPD) in supporting student-centred teaching and learning?
- What financial or administrative support is provided at university level to support student-centred teaching and learning approaches? These might include funding for pedagogic research, curricular development projects etc. and might be provided through central funds or through specific research units with budgetary autonomy.
- What is the overall leadership structure at university level for academic programmes including teaching, learning and assessment?

Faculty/department level:

- What are the communication structures and relationships between the higher management level at the university and the level of facultyand/or department related to student-centred teaching and learning?
- What is the role of faculty and/or department in the new study programme development?

- How do faculty share and access examples of good practice within departments?

Study board level:

- What is the structure and relationship of a Board of Studies (or other level) with the department, faculty and research centres within department?
- Is there a procedure for inter-disciplinary or multi-disciplinary programmes? Does this require the establishment of unique committees/boards and how do these relate to the overall structure? Are there problems in establishing such degrees? What are the problems?
- In depth review of assessment practice: the use of innovative methods of assessment e.g. peer assessment, the role of formative and summative assessment, types of assessment, blind and double marking, monitoring of assessment to ensure that it is effective in relation to the achievement of learning outcomes, mark distribution analysis both within a subject and between other subjects (i.e. across the University) to ensure equity and comparability, use of external examiners, marking systems with a clear definition of criteria (Note: the integration of assessment into the process of student centred learning and its relationship with learning outcomes is critical).
- What is the process for (a) the approval of a new degree programme – is there any difference between first cycle, second cycle and third cycle? (b) the approval of a new module in an existing degree? What level of change, enhancement in a degree programme or a module requires full institutional approval? How long does the process take for each of these? Note: Understanding the approval cycle is important.
- What role do students play in curriculum planning and development? Is there a difference in their role between the cycles? Note: it is important to understand how the students are appointed/nominated to relevant bodies and how they report back to their constituency.
- What procedures(if different from above) exist for developing new study programmes?
- How is e-learningimplemented and to what extent is it embedded within the programmes?
- How are staff members involved in managing and coordinating a particular study programme (programme coordinators, semester coordinators, supervisors)? How is this formalized?
- What is the process for annual monitoring and periodic review of programmes?
- Are there any performance indicators?
- What is the process for student feedback? How is this managed and what impact does it have? Does it result in feedback on outcomes to the students?

Integrating disadvantaged groups of students:

- Does the University have an office/staff dedicated for students with a disability? What are the responsibilities and resources of the office?
- What special arrangements are made for students with a disability (incl., according to UN Convention on the Rights of Persons with Disabilities)?
- What are the capacities of the university to work with studentsfrom disadvantaged backgrounds with regard to teaching approaches?

- What special approaches exist that are targeted at socially disadvantaged students?
- What approaches are followed for inclusion of students from non-academic backgrounds, if any?
- What academic support is available to students with learning disabilities?

Physical environment:

- Is the physical environment suitable/adapted for students with a physical disability? Is there a programme of adaptation for students with a physical disability?
- What student facilities exist that support student-centred teaching and learning: study group rooms, common rooms for students, extended university library opening hours, free wifi on campus, IT assistance for students

2. Study programme fit-for-purpose

This part is concerned with exploring a current study programme structure at each EU-partner Universitywith the focus on operational, functional details, normative and technical details.The level of analysis is a particular study programme.

Each Task Force Team will employ this part of the methodology to develop a benchmark understanding of structures, procedures and process related to the development and management of study programmes in EU partner universities as well as explore the same at their own university in respective pilot study programme.

Study programme level:

- To what extent does it reflect the institutional strategy? [See also above]
- To what extent does it reflect subject benchmark statements of the equivalent?
- Is it competence based?
- Does it focus on 'employability'?
- Is it subject to professional or regulatory accreditation (particularly important for Medicine but probably the case for other subjects)
- Does it emphasise innovation, research led learning, entrepreneurship, internationalisation?
- To what extent does it use IT and/or blended learning?
- What is the structure of the chosen programme? (workload, semesters, modules, student evaluations, staff evaluations, learning progression). It would be useful to determine whether this process applies to second cycle as well?
- How is the programme developed, enhanced and managed? What role do students play in the process? What role do employers play? Are other stakeholders consulted/engaged?
- Are former graduates/alumni consulted/engaged?
- What are the functions of the project coordinator, semester coordinator, teaching staff at the programme?
- What supporting documents exist in relation to the study programme? (course description, study regulations, guidelines, learning outcomes, evaluation guides). Are these publicly available?

- What are the existing programme regulations and who is responsible for ensuring that they are followed?
- How are the programme structure and content monitored, reviewed, enhanced and implemented?
- How is staff workload calculated and monitored? How is the norm for allocation of hours (academic staff related) for various types of activities (teaching, supervision, evaluation) calculated (ECTS, formula, or historical)?
- How is student workload calculated and monitored and how does this help to shape curriculum planning and development?
- What are the expected learning outcomes? How are the learning outcomes reflected in the assessments? How are the learning outcomes communicated to the students and how are they assessed?
- How is the student evaluation/assessment conducted? What forms of evaluation are practiced? (Written exams/open questions, multiple choice tests, oral exams, project presentations. Are there innovative forms of assessment e.g. peer assessment, IT based?)
- What are the progression requirements?
- What measures are taken to avoid and sanction 'cheating' and plagiarism? How are these recorded and evaluated?
- What are provisions for student appeals?
- What is the existing system of grading? What are the arrangements for credit transfer and accreditation of prior learning?
- What is the role of the external examiner?
- How is student-mobility embedded in the programme structure and how it is facilitated?
- How is the stuff evaluation/feedback conducted by the students? How are the outcomes of feedback managed?
- What are the academic requirements for students to enter the programme?
- How do students contribute to the curriculum development?
- How are the programmes supported by administrators and what responsibilities do administrators have in directly supporting students? (e.g., answering enquiries; administration of assessments; managing academics' diaries etc.).
- Is the employment of graduates monitored? If so how and over what period?
- Which software, e-learning (e.g. Moodle, MOOC's, Knowledge Apps, moderated forums), how it is used, what checks there are for plagiarism

Annex 2. TUM study programmes

FULL-TIME STUDIES	PART-TIME STUDIES
Faculty of Energetics and Electrical Engineering	
523.1 Electroenergetics	523.1 Electroenergetics
524.1 Electromechanics	524.1 Electromechanics
529.1 Engineering and Quality Management	529.1 Engineering and Quality Management
521.8 Engineering and Management in Energetics	
523.2 Thermoenergetics	
Faculty of Engineering and Management in Electronics and Telecommunications	
525.1 Electronics	525.1 Electronics
521.8 Engineering and Management in Telecommunications	521.8 Engineering and Management in Telecommunications
525.2 Optoelectronic Systems	525.2 Optoelectronic Systems
525.3 Radio and telecommunications	525.3 Radio and telecommunications
Faculty of Computers, Informatics and Microelectronics	
526.1 Computers	526.1 Computers
444.3 Applied Informatics	526.2 Information Technology
526.4 Biomedical Systems Engineering	
525.4 Microelectronics and Nanotechnologies	
444.2 Informational Management	
526.5 Informational Security	
526.2 Information Technology	
Faculty of Mechanical and Industrial Engineering and Transport	
527.1 Engineering and technology of motor transport	521.8.4 Transport Engineering and Management
527.2 Engineering and technology of railway transport	527.1 Engineering and technology of motor transport
522.2 Machinery and equipment for the Food Industry	522.2 Machinery and equipment for the Food Industry
522.1 Machinery and equipment for the Light Industry	522.3 Refrigerating equipment and air-condition systems
522.3 Refrigerating equipment and air-condition systems	
841.1 Transport technology (auto, plane, railway, ship)	
522.6 Equipment and technology for the packing industry	

Faculty of Mechanical and Industrial Engineering and Transport	
521.2 Equipment and Agricultural Machinery Construction	521.9 Innovative Engineering and Technology Transfer
521.7 Industrial Design	521.8.1 Machine Construction Engineering and Management
521.9 Innovative Engineering and Technology Transfer	521.1 Manufacturing Engineering
521.8.1 Machine Construction Engineering and Management	
521.3 Machinery and Production Systems	
521.1 Manufacturing Engineering	
Faculty of Food Technology	
552.2 Industrial Biotechnology	521.8 Engineering and Management in Food Industry
521.8 Engineering and Management in Food Industry	541.1 Technology and Management of Catering
541.1 Technology and Management of Catering	541.2 Technology of Food Production
541.2 Technology of Food Production	541.3 Technology of Wine and Fermented Products
541.3 Technology of Wine and Fermented Products	
Faculty of Textile and Polygraphy	
215.1 Decorative arts	543.4 Polygraph Design and Technologies
543.4 Polygraph Design and Technologies	521.8 Engineering and Management in Light Industry
542.2 Industrial Clothes Design	542.1 Textile and leather production engineering
521.8 Engineering and Management in Light Industry	
542.1 Textile and leather production engineering	
Faculty of Architecture and Urban Planning	
582.7 Engineering of gas supply and heating systems, ventilation	582.7 Engineering of gas supply and heating systems, ventilation
581.1 Architecture	582.4 Railways, Roads and Bridges
582.4 Railways, Roads and Bridges	582.2 Engineering of construction materials and fittings
581.4 Interior Design	522.4 Mechanical Engineering in Construction
582.6 Engineering and Water Protection	582.6 Engineering and Water Protection
522.4 Mechanical Engineering in Construction	543.2 Technology of pottery and glass
211.3 Sculpture	581.2 Urban planning and landscape management
543.2 Technology of pottery and glass	

581.2 Urban planning and landscape management	
Faculty of Cadastre, Geodesy and Constructions	
582.1 Construction and Civil Engineering	584.3 Assessment of Real Estate
381.1 Law	521.8.1 Engineering and Management in Construction
584.3 Assessment of Real Estate	543.1 Wood Processing Technology
584.2 Geodesy, Topography and Mapping	
582.5 Fire Engineering and Civil Protection	
521.8.1 Engineering and Management in Construction	
521.5 Deposits Engineering and management, Mining	
543.1 Wood Processing Technology	
Faculty of Economic Engineering and Business	
363.1 Business and Administration	
361.1 Accounting	
362.1 Marketing and Logistics	

Annex 3: Educational plan for the study programme "Software Engineering"

Year I										
Semester I	***Learning based on problems of science, technology and society***									
Code	**Name of the course unit / module**	***Total hours***			***Number of hours by type of activity***				***Evaluation form***	***No. of credits***
		Total	***Direct contact***	***Individual study***	***C***	***S/P***	***Pr***	***per week***		
G.01.O.013	Conceptual design of an IT application	300	150	150			150		PA	10
F.01.O.001	Mathematics	150	75	75	45	30			E	5
F.01.O.002	Computer programming	150	75	75	30	15	30		E	5
F.01.O.003	Special Mathematics 1	150	75	75	30	45			E	5
U.01.A.021 *U.01.A.022*	Computer history *Computer science and society*	150	75	75	30	30	15		E	5
G.01.O.014	*Foreign language 1***	*90*	*45*	*45*		*45*			*E**	*3*
G.01.O.015	*Romanian language (alolingual) 1**	*60*	*30*	*30*		*30*			*T**	*2*
G.01.O.016	*Physical Education 1**	*60*	*30*	*30*		*30*			*T**	
	Total semester I:	**900**	**450**	**450**	**135**	**120**	**195**	**0**	**5E**	**30**
					450					
Semester II	***The engineering and scientific basis of the calculation***									
Code	**Name of the course unit / module**	***Total hours***			***Number of hours by type of activity***				***Evaluation form***	***No. of credits***
		Total	***Direct contact***	***Individual study***	***C***	***S/P***	***Pr***	***per week***		
F.02.O.004	Equivalent models	300	150	150			150		PA	10
F.02.O.005	Applied Sciences	150	75	75	30	15	30		E	5
F.02.O.006	Special Mathematics 2	150	75	75	30	15	30		E	5
F.02.O.007	Computer architecture	150	75	75	30	45			E	5
F.02.O.008	Data structures and algorithms	150	75	75	30	30	15		E	5
G.02.O.017	*Foreign language 2**	*90*	*45*	*45*		*45*			*E**	*3*
G.02.O.018	*Romanian language (alolingual) 2**	*60*	*30*	*30*		*30*			*T**	*2*
G.02.O.019	*Physical Education 2**	*60*	*30*	*30*		*30*			*T**	
	Total semester I:	**900**	**450**	**450**	**120**	**105**	**225**	**0**	**5E**	**30**
					450					
	Total I year of studies:	**1800**	**900**	**900**	**255**	**225**	**420**	**0**	**10E**	**60**

**- It is not calculated in the total amount of the evaluation forms (the course units are carried out under extracurricular arrangements and they are allocated credits in addition to the 240 credits per program, and the course unit "Physical education" is not quantified with credits).*

T - Test, rated "accepted / rejected"*

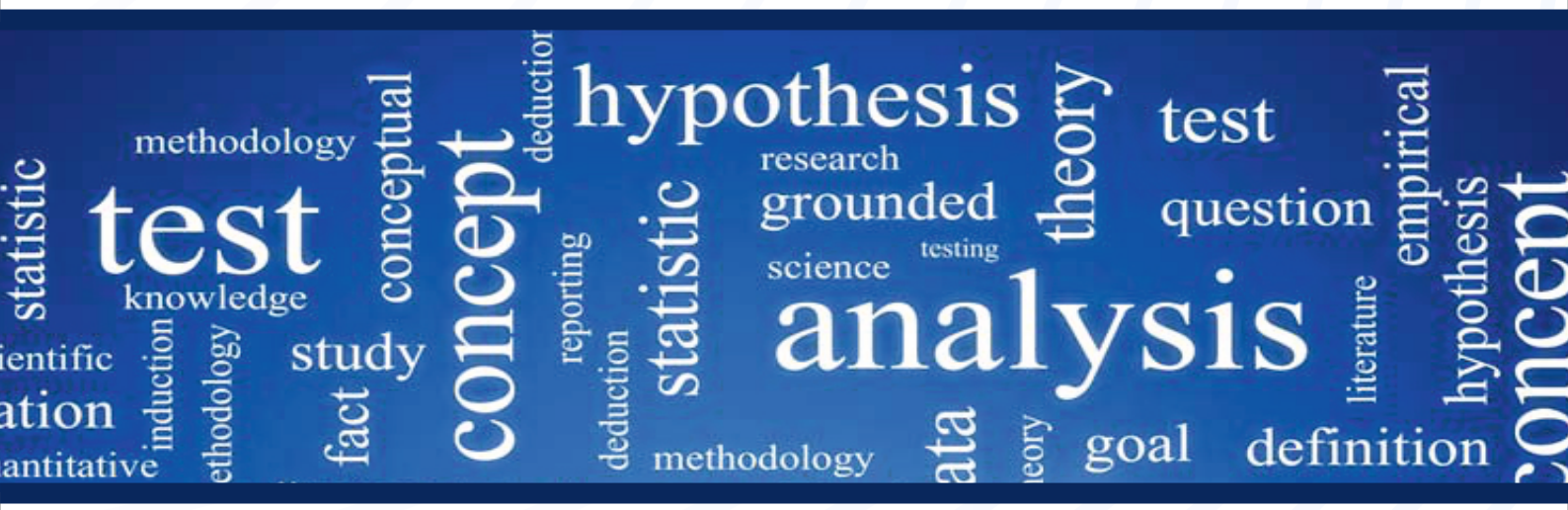
Year II											
Semester III	***The bases of application development***										
Code	**Name of the course unit / module**	***Total hours***			***Number of hours by type of activity***				***Evaluation form***	***No. of credits***
		Total	***Direct contact***	***Individual study***	***C***	***S/P***	***Pr***	***per week***		
S.03.O.027	The bases of application development	300	150	150			150		PA	10
S.03.O.028	Object oriented programming	150	75	75	30	15	30		E	5
S.03.O.029	Computer Networks	150	75	75	30	45			E	5
S.03.O.030	Databases	150	75	75	30	15	30		E	5
S.03.A.039 *S.03.A.040*	Data analysis and visualization *Computer graphics*	150	75	75	30	30	15		E	5
	Total semester III:	**900**	**450**	**450**	**120**	**105**	**225**	**0**	**5E**	**30**
					450					
Semester IV	***Formal languages and compilers***									
Code	**Name of the course unit / module**	***Total hours***			***Number of hours by type of activity***				***Evaluation form***	***No. of credits***
		Total	***Direct contact***	***Individual study***	***C***	***S/P***	***Pr***	***per week***		
F.04.O.009	Development of domain-specific languages	300	150	150			150		PA	10
F.04.O.010	Formal languages and compiler design	150	75	75	30	15	30		E	5
F.04.O.011	Calculability and complexity	150	75	75	30	15	30		E	5
S.04.O.031	Operating systems: internal mechanisms and design principles	150	75	75	30	45			E	5
S.04.A.041 *S.04.A.042*	Multimedia technologies *Modeling and simulation techniques*	150	75	75	30	30	15		E	5
	Total semester IV:	**900**	**450**	**450**	**120**	**105**	**225**	**0**	**5E**	**30**
					450					
Internship in production (It is done at the student's choice based on the modules *Bases of Application Development* and *Development of domain-specific languages*)										
	Total II year of studies:	**1800**	**900**	**900**	**240**	**210**	**450**	**0**	**10E**	**60**

Year III											
Semester V	***Networks and security***										
Code	**Name of the course unit / module**	***Total hours***			***Number of hours by type of activity***				***Evaluation form***	***No. of credits***
		Total	***Direct contact***	***Individual study***	***C***	***S/P***	***Pr***	***per week***		
S.05.O.032	Developing secured applications	300	150	150			150		PA	10
S.05.O.033	Network programming	150	75	75	30	15	30		E	5
S.05.O.034	Cryptography and security	150	75	75	30	15	30		E	5
G.05.O.020	Ethics, communication and law	150	75	75	45	30			E	5
S.05.A.043 *S.05.A.044*	Techniques and mechanisms for software design *Verification and validation of program products*	150	75	75	30	30	15		E	5
	Total semester V:	**900**	**450**	**450**	**135**	**90**	**225**	**0**	**5E**	**30**
					450					
Semester VI	***The Internet of things (IoT)***									
Code	**Name of the course unit / module**	***Total hours***			***Number of hours by type of activity***				***Evaluation form***	***No. of credits***
		Total	***Direct contact***	***Individual study***	***C***	***S/P***	***Pr***	***per week***		
S.06.O.035	IoT projects	300	150	150			150		PA	10
S.06.O.036	Embedded systems	150	75	75	30	15	30		E	5
F.06.O.012	Signal processing	150	75	75	30	30	15		E	5
S.06.A.045 *S.06.A.046*	Human - computer interaction *Real time programming*	150	75	75	30	15	30		E	5
S.06.A.047 *S.06.A.048*	Mobile applications programming *Web programming*	150	75	75	30	15	30		E	5
	Total semester VI:	**900**	**450**	**450**	**120**	**75**	**255**	**0**	**5E**	**30**
					450					
Technological internship (It is done at the student's choice based on the modules *Developing secured applications* and *IoT projects*)										
	Total III year of studies:	**1800**	**900**	**900**	**255**	**165**	**480**	**0**	**10E**	**60**

Year IV											
Semester VII										***Information systems***	
Code	**Name of the course unit / module**	***Total hours***			***Number of hours by type of activity***				***Evaluation form***	***No. of credits***
		Total	***Direct contact***	***Individual study***	***C***	***S/P***	***Pr***	***per week***		
S.07.O.037	Designing information systems	300	150	150			150		PA	10
S.07.O.038	Programming distributed applications	150	75	75	30	15	30		E	5
U.07.A.023 *U.07.A.024*	Software Project Management *Company Management*	150	75	75	30	30	15		E	5
U.07.A.025 *U.07.A.026*	Electronic marketing *Digital entrepreneurship*	150	75	75	30	30	15		E	5
S.07.A.049 *S.07.A.050*	Software quality *Analyzing and specifying software requirements*	150	75	75	30	30	15		E	5
	Total semester VII:	**900**	**450**	**450**	**120**	**105**	**225**	**0**	**5E**	**30**
					450					
Semester VIII										***Bachelor's degree project***	
Code	**Name of the course unit / module**	***Total hours***			***Number of hours by type of activity***				***Evaluation form***	***No. of credits***
		Total	***Direct contact***	***Individual study***	***C***	***S/P***	***Pr***	***per week***		
S.08.A.051 *S.08.A.052*	Fundamentals of artificial intelligence *Non relational databases*	150	75	75	30	45			E	5
S.08.A.053 *S.08.A.054*	Fundamentals of game developing *Mixed reality technologies*	150	75	75	30	45			E	5
S.08.A.055	Bachelor's degree project	450		450					E	15
S.08.A.056	Theoretical synthesis test: *Algorithms, programming and databases*	120		120					E	4
S.08.A.057	Defence of the Bachelor's degree project	30		30					E	1
	Total semester VIII:	**900**	**150**	**750**	**60**	**90**	**0**	**0**	**5E**	**30**
	Total IV year of studies:	**1800**	**600**	**1200**	**180**	**195**	**225**	**0**	**10E**	**60**
	Total for the study programme:	**7200**	**3300**	**3900**	**930**	**795**	**1575**	**0**	**40E**	**240**

Tell me and I forget,
Teach me and I may remember,
Involve me and I learn.

Folklore



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